

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

Project Title

DWSP Harvest Permit Number: 3144
DCR Forest Cutting Plan File Number: 204-8233-16

Site Information

Watershed: Quabbin	Town(s): New Salem
Acres: 27	Nearest Road: Hunt Road
Natural Heritage Atlas overlap?: No	Public Drinking Water Supply Watershed?: Yes
Forest Types: white pine-hardwoods and mixed oak	ACEC?: No
Soils: Chatfield-Hollis and Canton-Chatfield-Hollis associations	
Wetland Resources: none	
Vernal Pools: none	

Harvest Information

Harvest Start Date: July 2016	Harvest End Date:
Number of Wetland Crossings: none	Number of Stream Crossings: none

Best Management Practices Applied

Stream Crossings	none
Filter Strips	none
Wetland Crossings	none
Harvesting in Wetlands	none

DWSP Forester supervising this harvest

Name: Helen Johnson
Forester License #: 383
Phone #: 978-544-6343
Email: Helen.Johnson@state.ma.us

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 necrotia, 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 necrotia 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 necrotia 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:

The lot contains no known rare or endangered species.

FIGURES

Figure 1. Forest Cutting Plan

Figure 2: June 2016: Before Harvest Photos, Openings A & B

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

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 _____
 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 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
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		

Note:
 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.

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	Total Mbf	68.7
Beech		Cordwood (Cds)	56
White Birch		SW Pulp (Tons)	89
B & Y Birch	4.1	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.

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 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.

[Handwritten Signature]
Signature of landowner(s)

5-27-16
Date

Service Forester

Determination and Status 204.8233-16

Approved Disapproved Expires 5/28/18
[Signature] 6/2/16
 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

Forest Types	Designation of Trees	Type of Cut	Source of Regeneration
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	Landowner Objective	SA Salvage	DS Direct Seed
SR Red Spruce	LT Long-term Mgt.	SN Sanitation	OT Other
	ST Short-term Har.		

*If Other (OT) or a non standard system is used an explanation must be provided.

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 _____

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

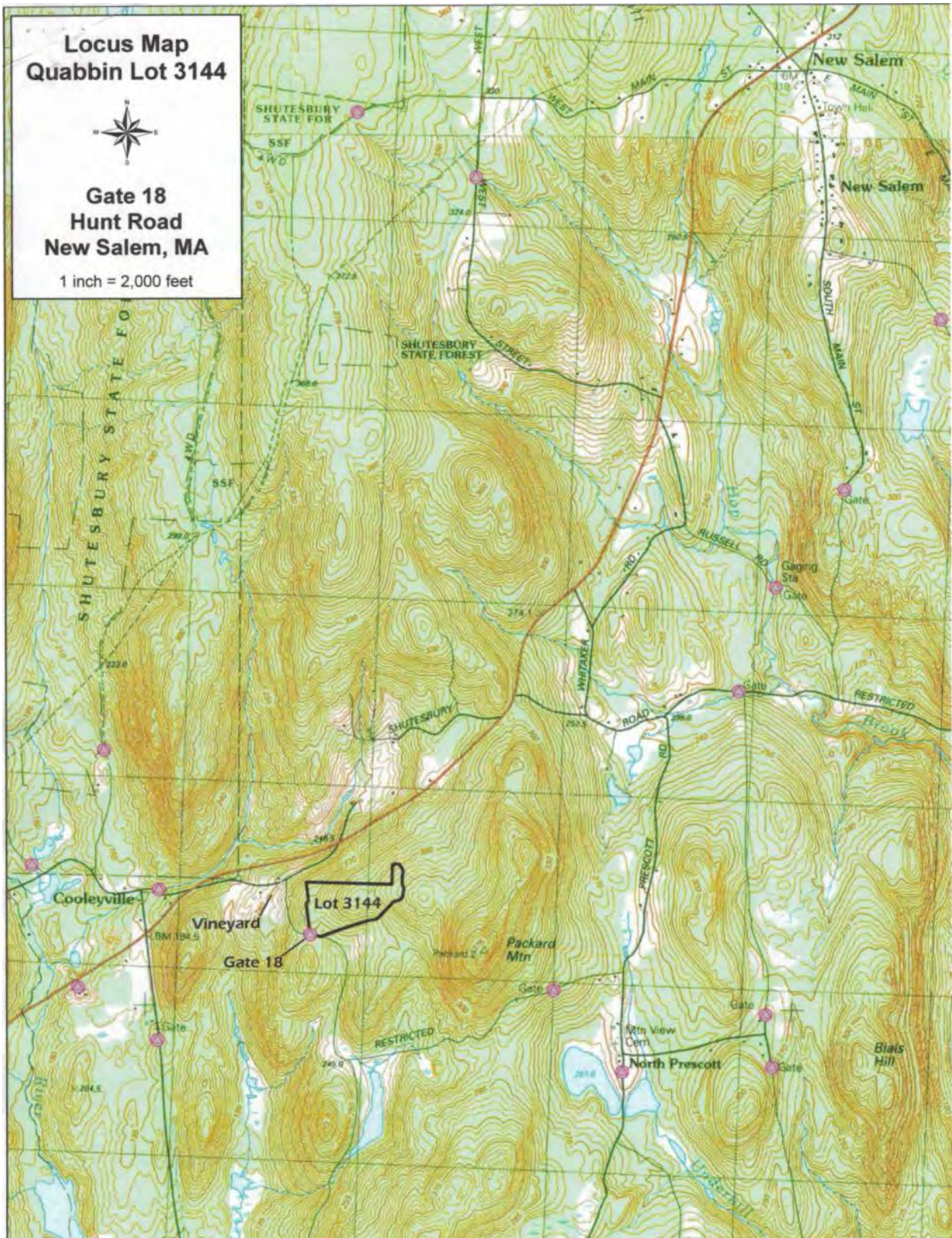
1	The desired future condition is a forest that is diverse in both tree species and age classes. The overall structure will be composed of patches of seedlings of multiple species within a mature forest. The overstory will continue to be dominated by white pine emergents overtopping black birch, with 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.

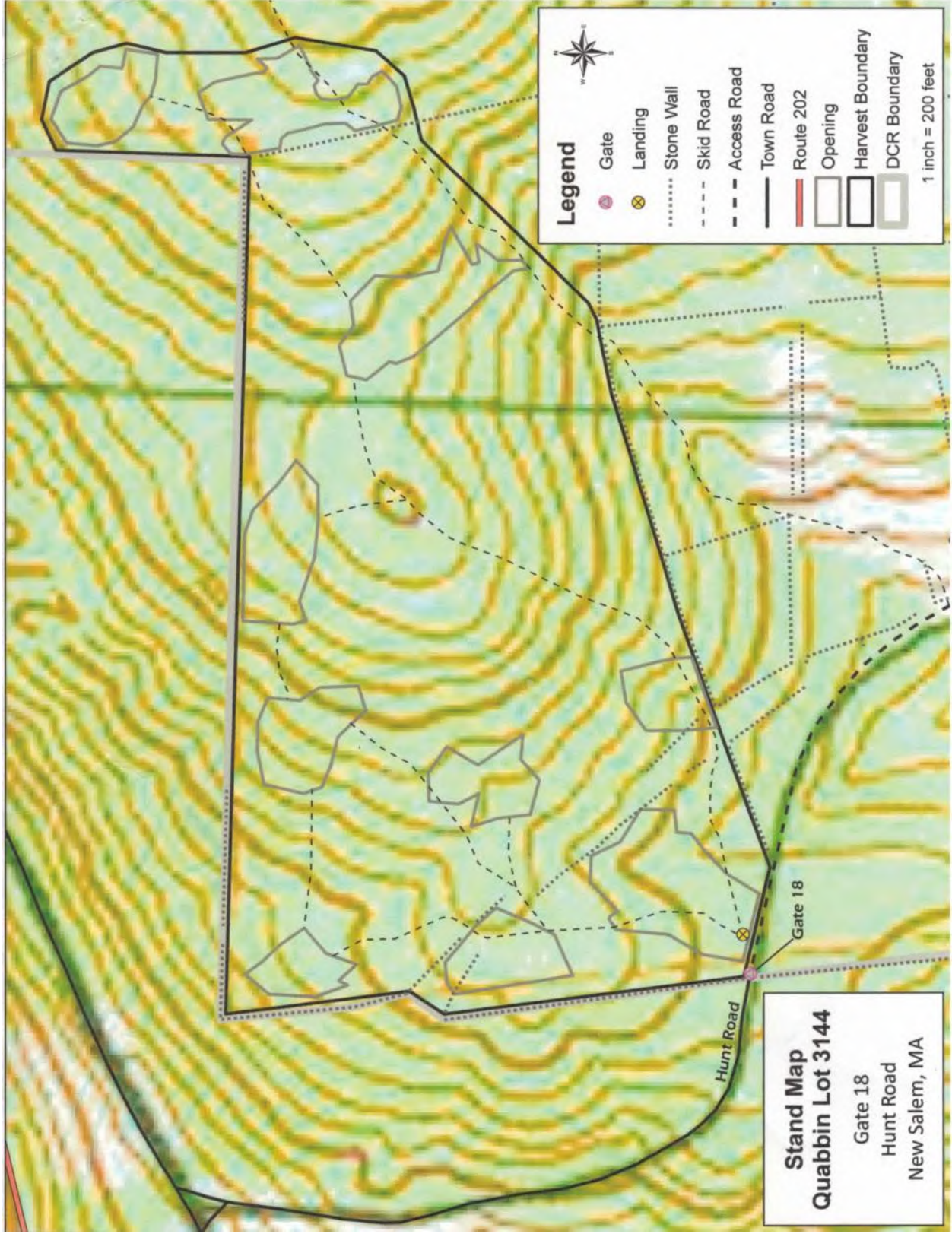
**Locus Map
Quabbin Lot 3144**



**Gate 18
Hunt Road
New Salem, MA**

1 inch = 2,000 feet





dcr



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 DRE-DWSP Quabbin 485 Ware Rd, Belcherstown, MA in accordance with the
(Name of Owner) (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

Hunt Rd (gate 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

Figure 2: June 2016: Before Harvest Photos, Openings A & B

- A. Note the evidence of past fire damage: charred stump at bottom left, charred log and tree trunks at center. The wood against the tree was found near an old (and illegal) fire ring.



Close up of fire damaged trees to be cut.



B. This opening will be primarily to the right of the stone wall at the center of the photo.

