

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

**Project Title:** Gays Hill Barrens Harvest 2

<b>DWSP Harvest Permit Number:</b> 3169
<b>DWSP Proposal ID:</b> NS-22-24 BFA2
<b>DCR Forest Cutting Plan File Number:</b> 204-33653-22

**Site Information**

<b>Watershed:</b> Quabbin	<b>Town(s):</b> New Salem
<b>Acres:</b> 26.6	<b>Nearest Road:</b> Route 122
<b>Natural Heritage Atlas overlap?:</b> Yes	<b>Public Drinking Water Supply Watershed?:</b> Yes
<b>Forest Types:</b> white pine-oak, mixed oak	<b>ACEC?:</b> No
<b>Soils:</b> Sudbury sandy loam, 3-8% slopes; and Hinkley sandy loam, Windsor loamy sand, and Canton fine sandy loam, all 8-15% slopes.	
<b>Wetland Resources:</b> Blackington Swamp is outside the harvest area to the north, and there is a small wooded wetland between the harvest area and a DWSP access road to the west.	
<b>Vernal Pools:</b> There is a verified vernal pool adjacent to Route 122.	

**Harvest Information**

<b>Harvest Start Date:</b> 4/6/2022	<b>Harvest End Date:</b> 4/27/2022
<b>Number of Wetland Crossings:</b> none	<b>Number of Stream Crossings:</b> none

**Best Management Practices Applied**

<b>Stream Crossings</b>	None
<b>Filter Strips</b>	The verified vernal pool next to Route 122 is protected by a 100' filter strip/shade zone, and a 200' low ground disturbance zone. On the cutting plan there's also a variable width filter strip along the stream flowing out of Blackington Swamp, but it is outside the harvest area for this project.
<b>Wetland Crossings</b>	None
<b>Harvesting in Wetlands</b>	None

**DWSP Foresters 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 3169 is located between Blackington Swamp and Route 122 in the town of New Salem, immediately west of a prior harvest that removed several red pine plantations (Lot 3159). The forest is a diverse mix of pines and oaks, with red, white, and pitch pines dominating the overstory, sometimes in nearly equal proportions, and red, black, scarlet, white and chestnut oaks as the primary associates. Species diversity is especially high near Route 122, where hemlock and red maple become more common, along with occasional paper birch, black birch, black cherry, hickory, white ash, beech and poplar. The understory is dominated by white pine seedlings and saplings, with oak seedlings common in areas with more sunlight such as near the highway. Other understory species include blueberries, wintergreen, partridgeberry and club moss.

Forest health in the project area is variable. Red pine scale is present and expected to cause 100% mortality of red pine trees within a few years. Pitch pines are at risk of infestation by another lethal invasive insect, the southern pine beetle, which is present in the region but has not yet been found in the immediate area of this harvest. Hardwood health is generally good, and only minimally affected by recent spongy moth infestations.

## **Site Selection**

This project is in one of the Barrens Focus Areas (BFAs) designated in the [DWSP 2017 Land Management Plan](#) (pp. 117-118 and 124-128) for the purpose of restoring pitch pine-oak/heathland habitat. These fire-adapted, disturbance-dependent natural communities are home to a large portion of state-listed declining species, and have been degraded by mesification (increasing dominance of white pine and red maple) due to a century or more of fire suppression and exclusion. This harvest is the second silvicultural step in the restoration process, following an adjacent red pine plantation removal completed in 2019 as part of Quabbin Lot 3159. Lot 3169 has been initiated at this time because red pine scale was newly identified in the mixed red-white-pitch pine, and because southern pine beetle has been identified in the region.

## **Silvicultural Objectives**

The four equally important objectives for the central portion of this harvest are:

- 1) remove red pine before it dies of red pine scale
- 2) remove species associated with degradation of barrens habitats through mesification
- 3) reduce the risk of southern pine beetle infestation by thinning around pitch pines
- 4) prepare for future prescribed fire by managing the post-harvest fuel load

Accordingly, all red pine, white pine, hemlock, red maple, and other non-oak hardwoods will be cut, and healthy pitch pine and oaks of all species will be retained. Pitch pines with poor health or vigor will be cut in order to give the remaining pines more growing space, and to provide sufficient intra-stand air flow to prevent concentrations of southern pine beetle pheromones.

The resulting well-stocked but open canopy of pitch pine and oak will be maintained thereafter with prescribed fire, which is expected to stimulate pitch pine regeneration, a resurgence of blueberries, a flush of fire-adapted herbaceous plant species, and the return of barrens-dependent insects and wildlife.

Harvesting on the 100-200 foot wide slope down to Route 122 in the south will have a much lighter selection harvest, focusing on removal of declining red pine and other current and potential hazard trees. The minimal harvesting in this area will exceed the legal requirement for a 50' forested road buffer, and will facilitate protection of the verified vernal pool near the highway.

## **Cultural Resources**

None known.

## **Rare or Endangered Species**

The Natural Heritage and Endangered Species Program (NHESP) of the Division of Fisheries and Wildlife has determined that state-listed sensitive species or habitats may exist within the harvest area. To protect them from unnecessary disturbance, detailed information regarding affected species and their locations is not included here. This harvest has been designed in consultation with NHESP in order to enhance habitat for state listed species, as well as to ensure their protection. In order to prevent a Take, NHESP issued restrictions on this project that are incorporated into the Forest Cutting Plan , and have been implemented on this harvest from its earliest planning stages.

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: 3/15/16)

## For DCR Use Only:

File Number 204-33653-22 Case No. NA  
Date Rec'd 11-5-21 Nat. Hert. yes  
Earliest Start 11-22-21 Pub. Dr. Wat. yes  
River Basin Chicopee ACEC NA  
Gen. Obj. LT

Site Information

## Location

Town New Salem QUABBIN LOT 3169  
Road Route 122  
Acres \_\_\_\_\_ Proposed Start Date December 2021  
Vol. MBF 89.8 Vol. Cds. 28 Vol. Tons 223

## 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

## 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

## 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				
Existing Structure				
Type of Bottom				
Bank Height (ft)				
Stabilization				

## Wetland 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)	100	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	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

## Products to be Harvested\*

Species	Mbf/Cds		Mbf/Cds
White Pine	42.1	Red Maple	
Red Pine	47.7	Sugar Maple	
Pitch Pine		Red Oak	
Hemlock		Black Oak	
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	
Beech		Cordwood (Cds)	28
White Birch		SW Pulp (Tons)	223
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	WP	WO	WO	
Acres	3.4	10.8	12.4	
Landowner Objective	LT	LT	LT	
Designation of Trees	OT	CT	CT	
Type of Cut	CC	SE	SN	
Source of Regeneration	SE	AD	AD	

## 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: 2021.11.05 07:59:43  
+0400

11/5/2021

Signature of landowner(s)

Date

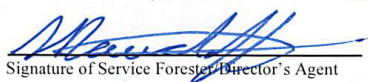
## Determination and Status

Approved Disapproved Expires

Cutting Plan



11-5-23



Signature of Service Forester/Director's Agent

Date

11-24-21

Extension

1 ☐

2 ☐

Expires

/

Ser. For. Ints.

Amendment

App 1 ☐

Dis 1 ☐

App 2 ☐

Dis 2 ☐

/

## 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

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	Black 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	SA	Selection	Non-Standard Systems:*			CO	Coppice
RP	Red Pine	OH	Oak/Hdwd	SM	Sugar Maple	Landowner Objective		SE	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 New Salem

File Number

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.

ST-1: cut trees  $\geq 10"$  dbh are marked; pines and hemlock  $< 10"$  will be cut within the area marked with double orange dots.

NHESP REQUIREMENTS for use of the old gravel pit as a landing:

- only the south portion of the pit may be used (the portion with more solid soils); and

- at the end of harvest all debris must be removed from the gravel pit, including chips, slash, and other woody material resulting from the operation, as well as trash; and

- after debris is removed, the landing must be raked down to mineral soil/sand.

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.

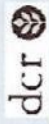
Stand No.	Describe Trees to be Cut			Describe Trees to be Left			% BA/AC	
	Species	Size	Quality	Species	Size	Quality	Cut	Left
ST-1	WP	all	all				100	
ST-1	HK	all	all				100	
ST-1	RM & BB	all	all				100	
ST-1				PP	all	all		100
ST-1				OAKS	all	all		100

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

# Quabbin Lot 3169 Stand Map

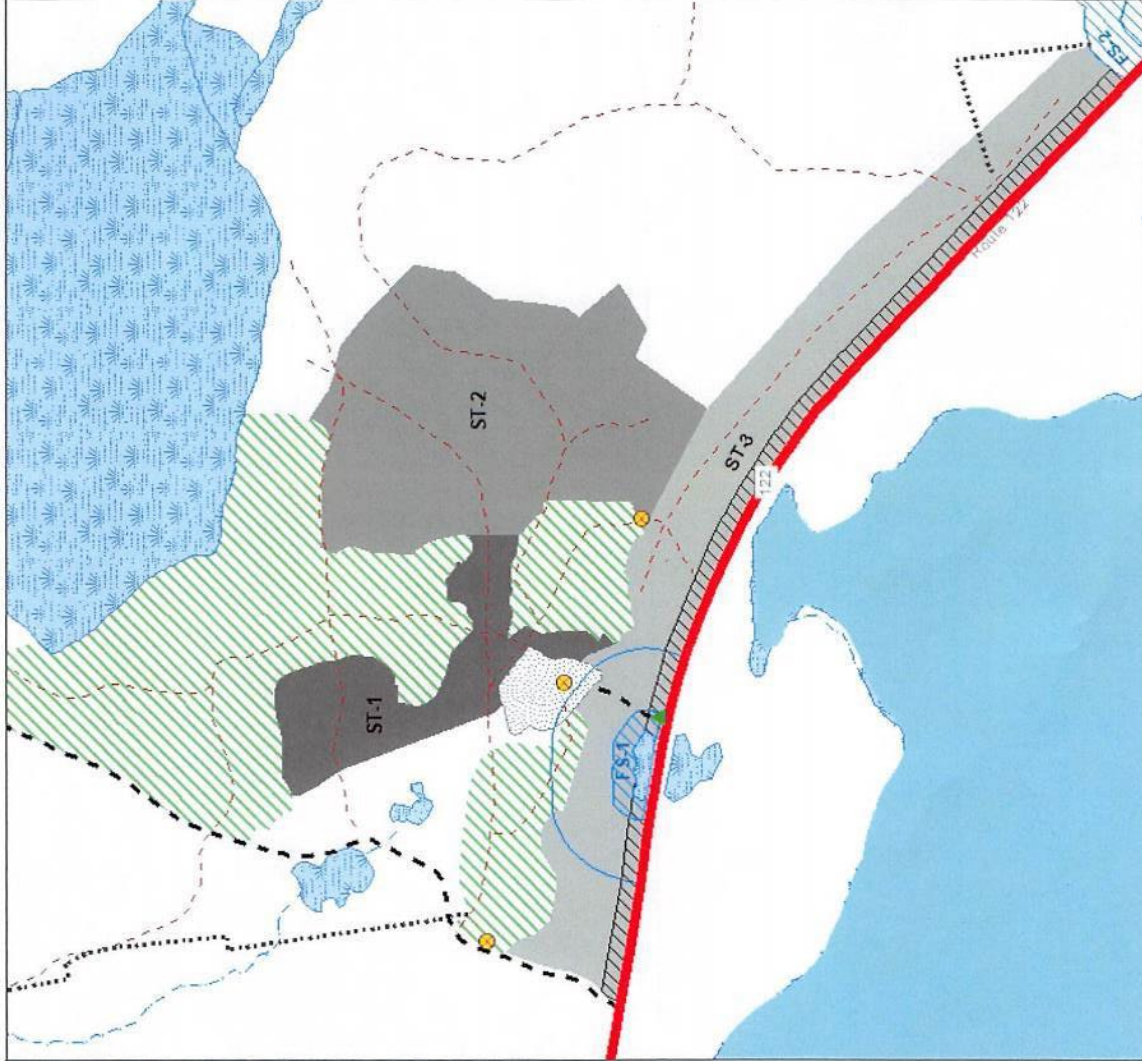
New Salem, MA

## LEGEND

- Gate
  - Landing
  - Skid Trail
  - Access Road
  - Stone Wall
  - Gravel Pit
  - O'Loughlin Pond
  - Wetland
  - Stream
  - Low ground disturbance zone
  - Filter Strip
  - Road Buffer
  - Previous Harvest (Lot 3159)
- Lot 3169**
- Stand 1
  - Stand 2
  - Stand 3

1 inch equals 350 feet

Prepared by Helen Johnson  
Quabbin Watershed Forester  
October 2021

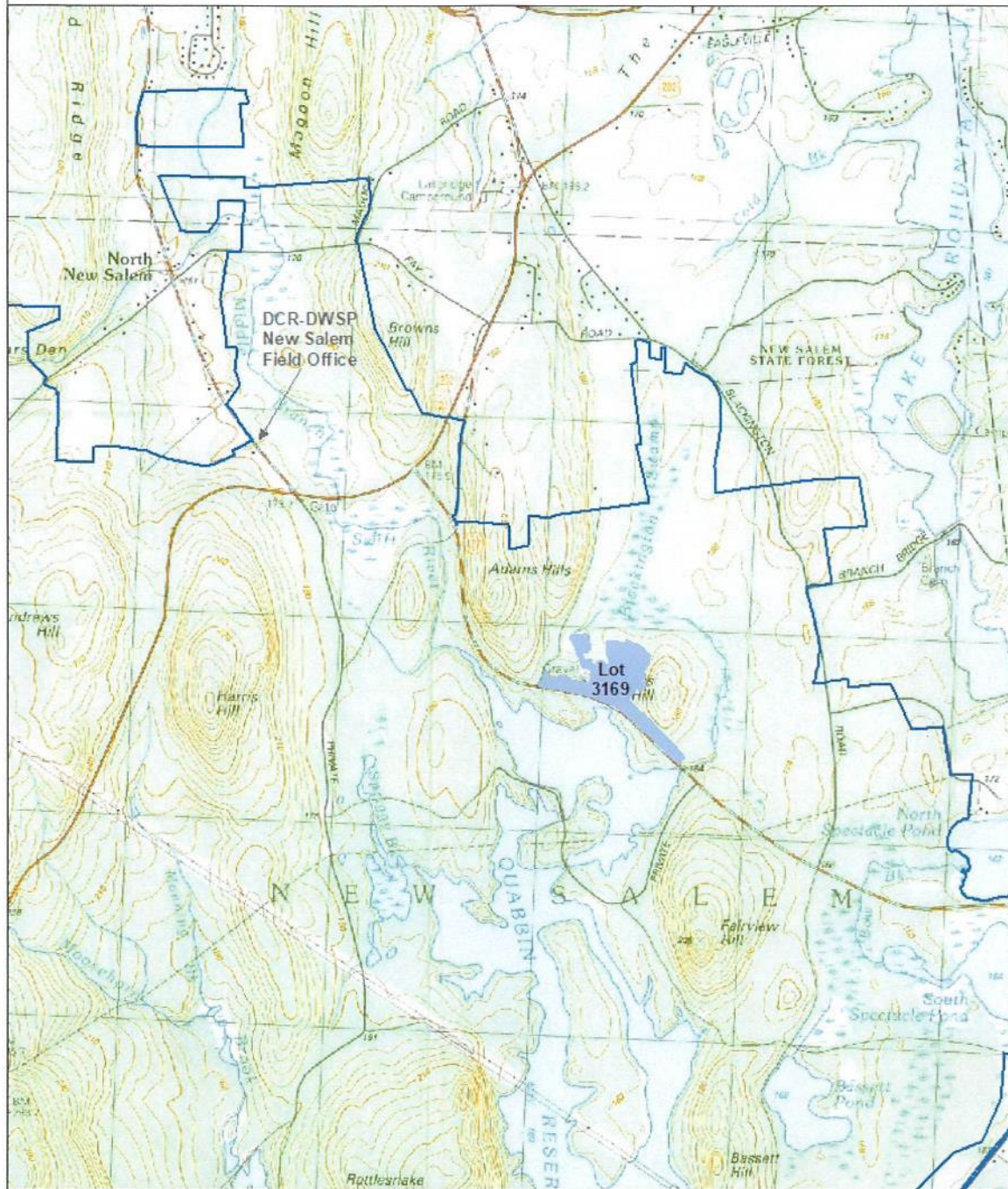




# Quabbin Lot 3169 Locus Map

New Salem, MA

1:24,000



dc<sub>r</sub>



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

FILE #

204-33653-22

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 Quabbin Belchertown, MA 01007 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  
Quabbin 3169 lot, New Salem

Approval Date 11-24-21

Director's Agent

Andrew Rawcliffe

DCR Phone No. 017-549-1677

ISSUED BY:

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