

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: 5269
DCR Forest Cutting Plan File Number: 241-8909-18

Site Information

Watershed: Wachusett	Town(s): Princeton
Acres: 23.7	Nearest Road: Gregory Road & Mirick Road
Natural Heritage Atlas overlap?: No	Public Drinking Water Supply Watershed?: Yes
Forest Types: Mixed Hardwoods, Northern red oak	ACEC?: No
Soils: Peru-Marlow moderately-well drained to well drained & poorly drained Pillsbury-Peacham	
Wetland Resources: There is a wetland in the northern section of this sale area. There is a small stream flowing out of the wetland in a south easterly direction that bisects this project and will not be crossed although a section of the filter strip will be cut. There is also an unregulated stream that runs parallel to the main stream for a short distance and is dry most of the year. This unregulated stream runs through a thinned section and a corner of one opening.	
Vernal Pools: None known.	

Harvest Information

DWSP Permit Start Date: 09/20/17	DWSP Permit End Date: 12/6/19
Number of Wetland Crossings: 0	Number of Stream Crossings: 0

Best Management Practices Applied

Stream Crossings	There are no streams crossings.
Filter Strips	Trees will be cut (<50%) in one of the filter strips.
Wetland Crossings	There are no wetland crossings.
Harvesting in Wetlands	No harvesting in wetlands will occur.

DWSP Forester supervising this harvest
Name: Russ Wilmot
Forester License # 426
Phone #: 978-792-7806 x318

NARRATIVES

General Description/Forest Composition/History:

This parcel of DCR land is the result of two acquisitions; the Butler acquisition (the western half of this piece) and the Milton acquisition (the eastern half), both purchased in 1998. Butler is characterized by its species-diverse mixed hardwood forest comprised of white ash, hickory (shagbark), red oak, red maple, sugar maple, white pine, hemlock and beech. There is an excellent understory of diverse advance regeneration with all of the overstory species well represented including black cherry and eastern hophornbeam. These saplings were given a big boost in their development following the ice storm in 2008. This area of Princeton was particularly hard hit. Fortunately, this stand has a high proportion of hickory and ash. Because of the toughness of hickory wood, the crowns tend to look like peeled bananas where many of the branches bend down but don't fully break off. Some of these branches may eventually die but many don't. The crowns then rebuild, filling in the gaps of the dead branches. White ash, on the other hand, has far more brittle wood and loses many of its branches to breakage. However it is well known for its ability to survive the loss of the majority of its crown. This stand suffered considerable damage to the over story trees thereby allowing much more sunlight to reach the advance regeneration which has clearly thrived in the seven years since the storm.

Shrubs include hobblebush, striped maple, maple-leaved viburnum, mountain laurel and winterberry in the wetter spots.

The Milton property has two stands both of which were logged in about 1990. A mixed hardwood stand along the lower slope near the stream is dominated by white ash, red maple and yellow birch. Most of this stand is quite wet and has a significant component of winterberry and grape. The other stand is a red oak stand that also has white ash, red maple and white pine. Advance regeneration is comprised of black birch, red maple, red oak, sugar maple and white pine.

Site Selection:

The ideal watershed protection forest is one which best serves the function of the land as a producer of high quality drinking water in both short- and long-term. This forest must be vigorous and diverse in tree species and ages, be actively accumulating biomass and actively regenerating. Such a forest will be ideally suited to be resilient to and quickly recover from small- and large-scale disturbances such as diseases, insect infestations, ice storms and hurricanes.

This area was chosen due to the lack of age diversity both in these 23.7 acres as well as the 1,196 acres of DCR-owned land that flows into the Wachusett Brook.

Silvicultural Objectives:

Given the good advance regeneration present, openings are being made to release this regeneration resulting in a new age cohort. Seven openings will be made totaling 5.2 acres. These range in size from 0.3 to 1.9 acres averaging 0.7 acres. Most of them are in the western part of this area taking advantage of the excellent and diverse hardwood regeneration. Another three acres are being thinned by removing the trees of poorest form and vigor, particularly the white ash which are not recovering well from the ice storm damaged.

Cultural Resources:

There are no known or documented significant historic or archeological resources in this area. According to models that predict the likelihood of the past use of a site by Native Americans, this area ranks as “Not Sensitive”.

Wildlife/Rare or Endangered Species:

There are no critical habitats or known rare or endangered plants or wildlife. All Best Management Practices regarding the retention of snag trees, trees with cavities and other valuable wildlife habitat features will be employed.

FIGURES

Figure 1. Forest Cutting Plan

Figure 2. Map of harvest area showing approximate boundary, proposed openings and other features

Figure 3. General locus map showing the location of the proposed timber harvest

Figure 4. Pre-Harvest Photographs, A-B

Figure 5. Post-Harvest Photographs, A-C

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) JUL 07 2017

For DCR Use Only:

File Number 241-8909-18 Case No. _____
Date Rec'd 7/7/17 Nat. Hert. NO
Earliest Start 7/24/17 Nat. Hert. Imp. NO
River Basin NASHUA Pub. Dr. Wat. WACHUSETT
Gen. Obj. LT ACEC NO

Site Information

Location

Town Princeton Lot 5269
Road Gregory rd & Mirick rd
Acres 23.7 Proposed Start Date 7/15/17
Vol. MBF 11.0 Vol. Cds. 111 Vol. Tons 26

Plan Preparer

Name Russell Wilmot
Address 180 Beaman St.
Town, State, Zip West Boylston, MA, 01583
Phone 508-792-7806 Ext 318
Type of Preparer Mass. Licensed Forester
*Mass. Forester License # 426
*Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name DCR/DWSP/OWM Wachusett/Sudbury
Mailing Address 180 Beaman St.
Town, State, Zip West Boylston, MA 01583
Phone 608-792-7806
Ch61 ☐ Ch61A ☐ Stew ☐ *Case # _____
Est. Stumpage Value _____

Licensed Timber Harvester**

Name To be supplied when known.
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)	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

ALL SILD TRAILS / RIDGES ARE EXISTING

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

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	1.8	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	5.9
Hemlock		Black Oak	
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	0.7
White Ash	2.7	Total Mbf	11.0
Beech		Cordwood (Cds)	111
White Birch		SW Pulp (Tons)	26
B & Y Birch		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.

Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	MH	RO		
Acres	20.7	3.0		
Landowner Objective	LT	LT		
Designation of Trees	CT	CT		
Type of Cut	SH	SH		
Source of Regeneration	AD/SE	AD/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 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)

Date

Determination and Status

Approved	Disapproved	Expires
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7-24-2019
Signature of Service Forester/Director's Agent		Date
7-13-2017		
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

Date

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

*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

Use only if further explanation is required of information on pages one or two or if "other" was used in any category.

Landowner: DOR-DWSP Wach.

Town: Princeton

File Number: 241-8909-18

BMPs	<p><u>A thinning of about 30% was marked in FS-1. The trees marked were primarily white ash in decline and some red maples. No trees are marked within FS-2.</u></p> <p><u>There are two landings (Gregory rd & Mirick rd) to avoid having a stream crossing on this sale.</u></p>
Silviculture	<p><u>In order to release advance regeneration, 7 openings in the overstory are being created, covering 5.2 acres.</u></p> <p><u>These openings range from 0.3 to 1.9 acres in size with an average of .7 acres. They are well distributed throughout the area taking advantage of the advance regeneration comprised of sugar maple, hickory, black cherry, red oak and other hardwoods.</u></p> <p><u>A thinning covering 3 acres targeted white ash in decline on the west side of the sale.</u></p>
Objectives	<p><u>The main objective of this operation is to diversify the age structure of the forest by removing the overstory in patches thereby releasing the advance regeneration. The current age structure is limited with an insufficient component of young forest.</u></p> <p><u>A secondary objective is to remove the declining white ash where they are most prevalent.</u></p>
Other	

Figure 2. Map of harvest area showing approximate boundary, proposed openings and other features

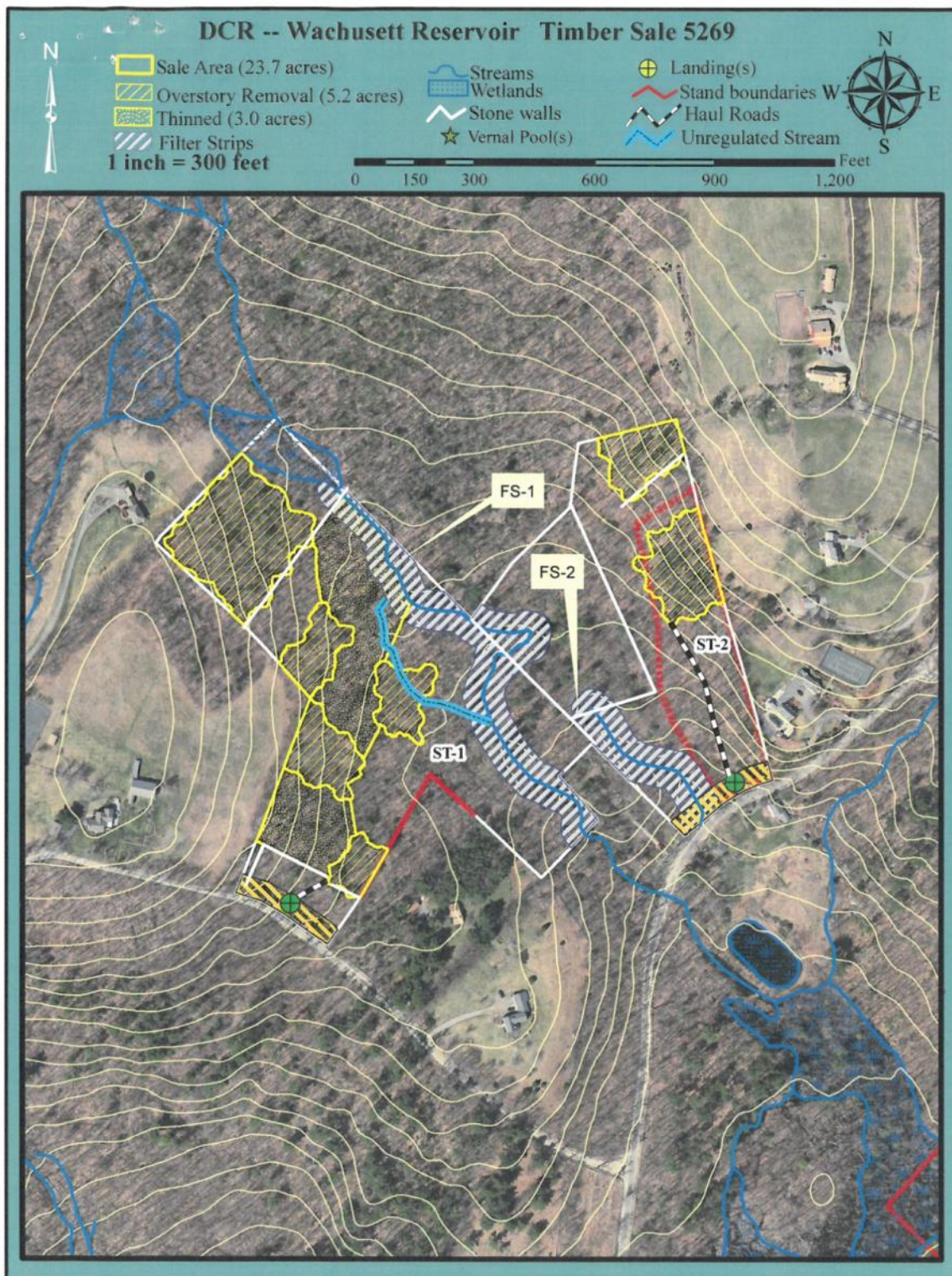
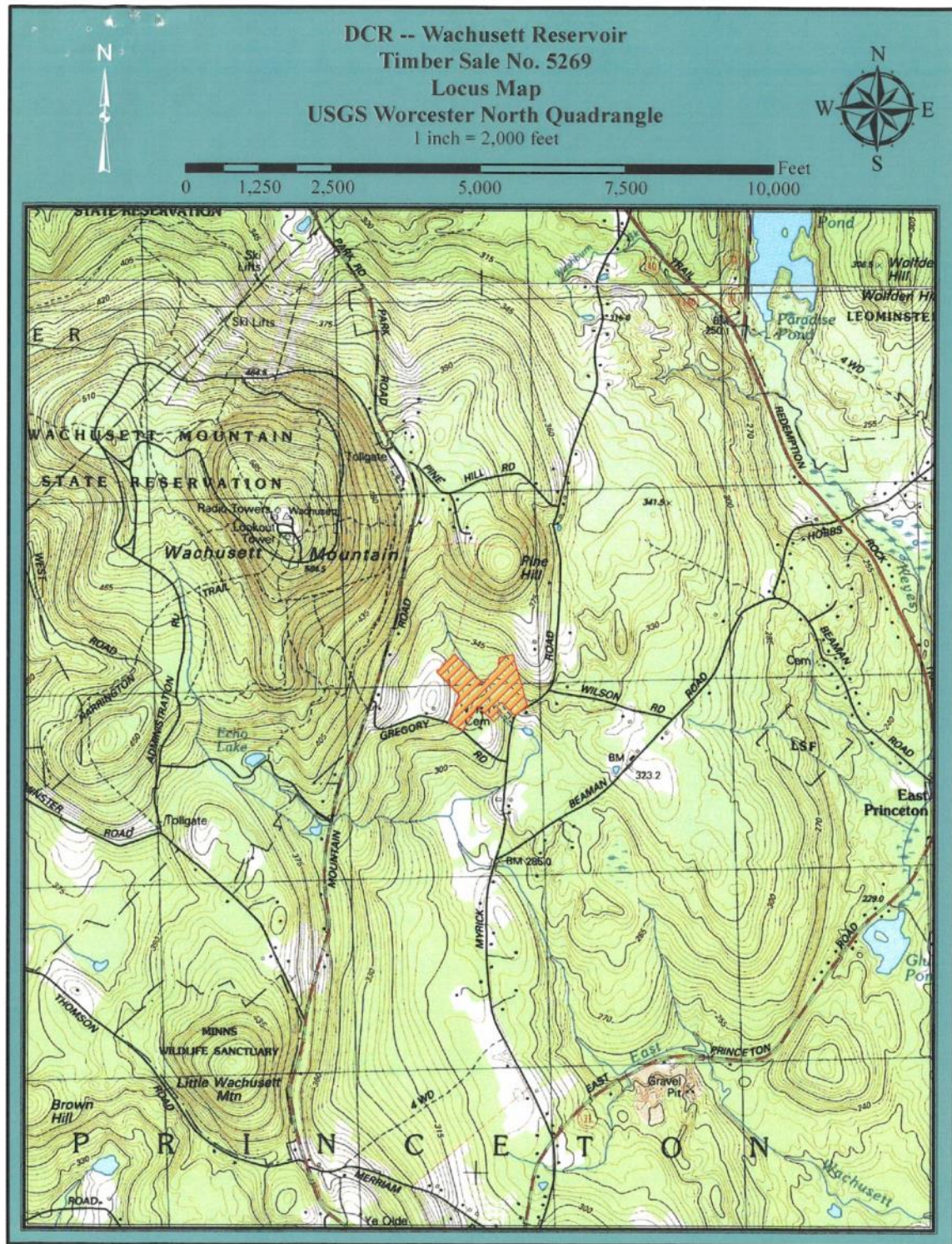


Figure 3. General locus map showing the location of the proposed timber harvest

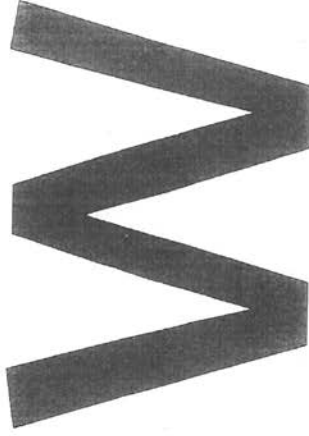


dcr



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

FILE # 241-8909-18



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/OWM W. Boylston in accordance with the
(Name of Owner) (Address)

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

GREGORY lot.

LOT 5268

7-13-2017

Approval Date

Director's Agent

MICHAEL DOWNEY

DCR Phone No.

978-368-0126

ISSUED BY:

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

Figure 4. Pre-Harvest Photographs A-B



A. The poorer quality red maples and white ash will be removed from this area benefitting the excellent quality hickory.



B. The excellent understory of diverse hardwoods including hickory, red oak, sugar maple and white ash will be released in this area by the removal of the overstory trees.

Figure 5. Post-Harvest Photographs, A-C



- A. The overstory of primarily ice storm-damaged ash trees was removed to release this understory of young hardwoods. While many of the hardwood saplings are still standing, those that were cut will sprout vigorously this spring and quickly fill what now appear to be vacant spaces. The large chunks of the white pine stem that were left will provide long-term coarse woody debris that's valuable for a wide range of habitat functions.



B. In this area of overstory removal, the black cherry and sugar maple trees were retained in order to improve the structural diversity in this area.



C. The poorer quality red maples and white ash trees were thinned from this area leaving the better quality trees such as the sugar maple near the center of this photo.