

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

Project Title: Lot 5269

DWSP Harvest Permit Number: 5269

DWSP Proposal ID: WA-17-33

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

Site Information

Watershed: Wachusett

Town(s): Princeton

Acres: 23.7

Nearest Road: Gregory Road and Mirick Road

Natural Heritage Atlas overlap?:

Public Drinking Water Supply Watershed?: Yes

Forest Types: Mixed Hardwoods, Northern red oak

Area of Critical Environmental Concern (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

Harvest Start Date: 9/20/2017

Harvest End Date: 12/6/2019

Number of Wetland Crossings: None

Number of Stream Crossings: None

Best Management Practices Applied

Stream Crossings: There are no stream 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: Greg Buzzell

Forester License number: 025

Phone number: 774-261-1841

Email: greg.buzzell@mass.gov

Narrative

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 the 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 7 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 prior. 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 3 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”.

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. Maps 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 41-8909-18 Case No. _____
 Date Rec'd 7/7/17 Nat. Hert. NO
 Earliest Start 7/24/17 Nat. Hert. Imp. NO
 River Basin NASQUA 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 Solid Trails / Roads 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

Forest Products

Products to be Harvested*

Table with 4 columns: Species, Mbf/Cds, Species, Mbf/Cds. Rows include White Pine, Red Pine, Pitch Pine, Hemlock, Spruce, Other Sftwd., White Ash, Beech, White Birch, B & Y Birch, Black Cherry.

*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

Table with 5 columns: Indicate location on map, ST-1, ST-2, ST-3, ST-4. Rows include Forest Type, Acres, Landowner Objective, Designation of Trees, Type of Cut, Source of Regeneration.

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.

[X] 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.

Signature of landowner(s)

Date

Service Forester

Determination and Status

Form with checkboxes for Cutting Plan, Extension, Amendment and various dates. Includes handwritten signatures and dates like 7-24-2009 and 7-13-2017.

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

Table of codes for Forest Types, Designation of Trees, Type of Cut, Intermediate Harvester, Non-Standard Systems, and Source of Regeneration.

*If Other (OT) or a non-standard system is used an explanation must be given on attached narrative page

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: DCR-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	

dcf



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

FILE # 241-8909-18

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

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 526A

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

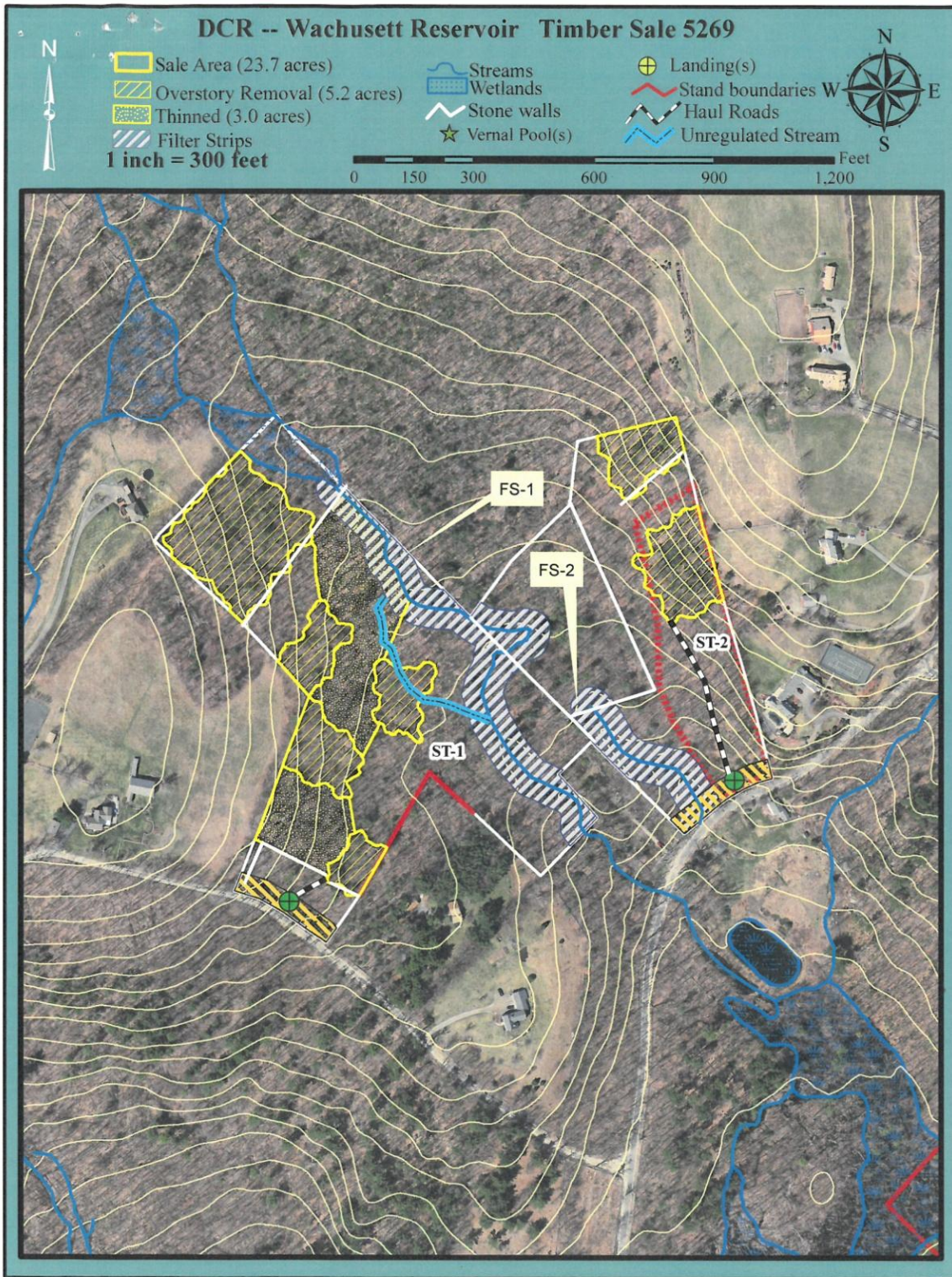


Figure 3. General locus map showing the location of the proposed timber harvest

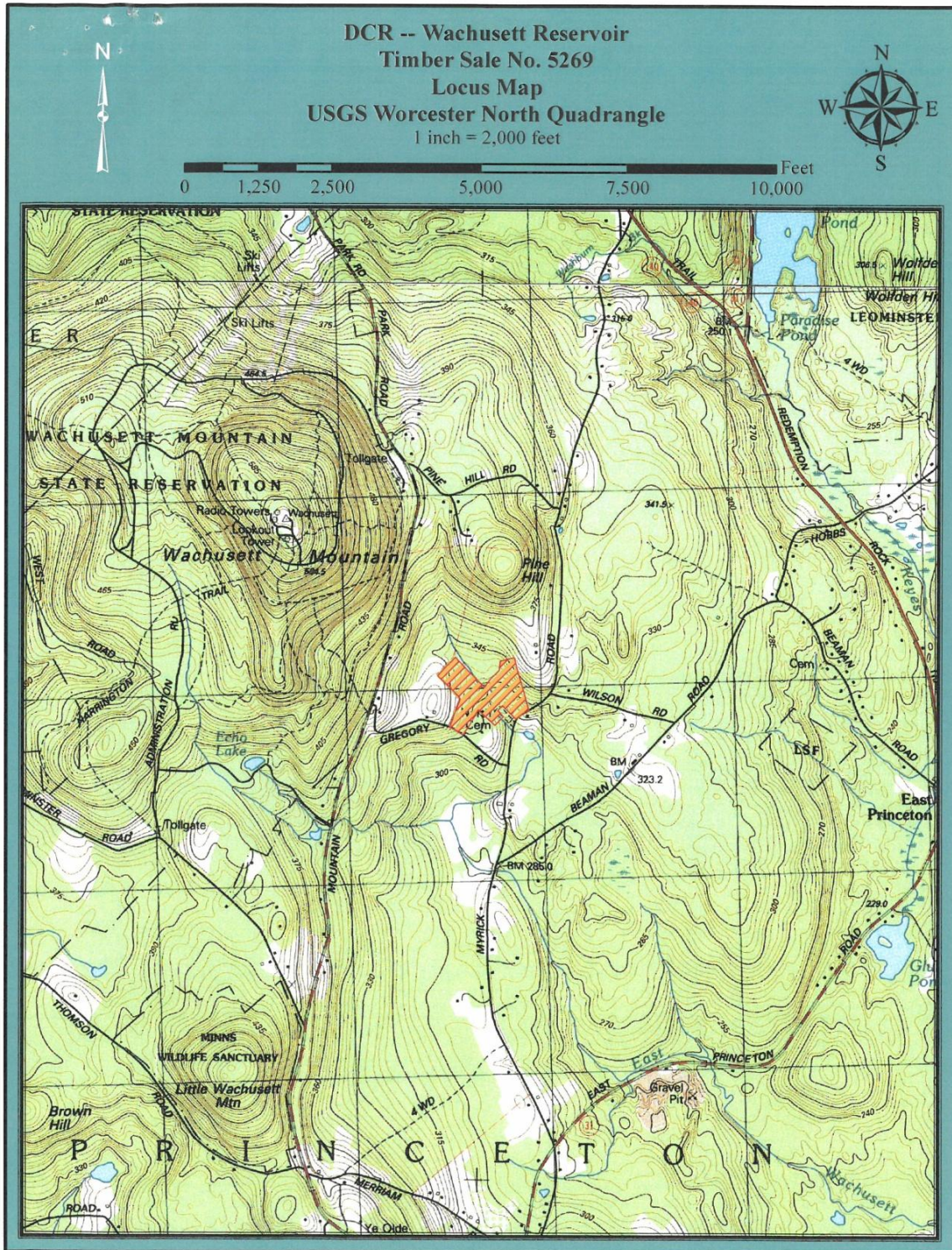


Figure 4. Pre-Harvest Photographs, A-B



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.