

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: 1045
DCR Forest Cutting Plan File Number: 124-7622-15

Site Information

Watershed: Quabbin	Town(s): Hardwick
Acres: 46	Nearest Road: Mellon Road
Natural Heritage Atlas overlap?: Yes	Public Drinking Water Supply Watershed?: No
Forest Types: white pine-oak	ACEC?: No
Soils: Woodbridge-Paxton and Charlton-Paxton associations, extremely stony	
Wetland Resources: Muddy Brook runs parallel to the harvest area on the east side.	
Vernal Pools: None	

Harvest Information

Harvest Start Date: June 25, 2015 or later	Harvest End Date: June 30, 2017
Number of Wetland Crossings: None	Number of Stream Crossings: None

Best Management Practices Applied

Stream Crossings	There are no stream crossings.
Filter Strips	Variable width filter strip along Muddy Brook; no harvesting within 50 feet of Brook.
Wetland Crossings	There are no wetland crossings.
Harvesting in Wetlands	There is no harvesting in wetlands.

DWSP Forester supervising this harvest

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

NARRATIVES

General Description/Forest Composition/History:

The area to be harvested is in the town of Hardwick, and is bounded by Greenwich Road to the south and Mellon Road to the west. Muddy Brook runs parallel to the east boundary of the lot, about 100 feet away. Another harvest is planned for the area immediately to the north up to Fleming Road, also bounded by Mellon Road to the west and Muddy Brook to the east.

The stone walls on this lot attest to its history of clearing for agriculture, mostly for pasture. When the farmland was abandoned, probably in the late 19th or early 20th century, it reverted to forest. This lot was part of a privately owned parcel that was given to the Nature Conservancy in 1978, which then donated it to DCR (then called the Metropolitan District Commission) in 1980.

The primary tree species are white pine and mixed oaks, particularly red oak. Other hardwoods include black and paper birch, red maple, poplar, ash, and hickory. Hemlock occurs in small groves, particularly near Mellon Road. A harvest in 1990 resulted in extensive regeneration, some of which was damaged and/or partially released by recent winter storms.

The soils on this lot are primarily Woodbridge-Paxton and Charlton-Paxton associations, extremely stony. These are glacial till soils derived from granite and gneiss, composed mostly of fine sandy loams. They range from moderately well drained (Woodbridge) to well drained (Charlton and Paxton). There is some exposed bedrock at the high points.

Site Selection:

The primary goal of this harvest 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.

On this parcel the work of diversifying the forest was begun in 1990. The current harvest will build on the success the earlier harvest by continuing the process of establishing new tree seedlings and providing space for existing regeneration to expand and grow. The full diversity of native species is being maintained and promoted in all age classes. This combination of structural and species diversity builds resistance and resilience into the forest.

Silvicultural Objectives:

The main treatment at this time is the removal of the overstory in small groups, up to ½ acre in size, in order to foster regeneration. Groups were placed where there were clusters of trees that were declining or had weak stem form, often due to insects, diseases, or storm damage. These vulnerable trees will be replaced with vigorous new seedlings, or with saplings where there is existing regeneration to be released. In some places on the slope leading to the stream the areas between groups were

thinned to improve the vigor of the remaining overstory trees. Wherever possible wildlife habitat features were maintained and protected, such as snags (dead trees) and trees with cavities or raptors' nests.

Cultural Resources:

Stone walls are present along parts of Mellon Road, and there a few walls in the interior of this lot. These walls are discontinuous, and thus can easily be avoided and protected during the upcoming harvest. This is in keeping with DWSP's standard practice, which dictates that every effort be made to keep existing stone walls intact. Otherwise, this area has been determined not to be culturally or archeologically sensitive based on a review by the DCR Archaeologist.

Wildlife/Rare or Endangered Species:

The easternmost portion of this lot is within a habitat "bubble" designated for protection by the Natural Heritage and Endangered Species Program (NHESP). In order to protect the species in this area, NHESP has determined that work within 50-300 feet of Muddy Brook will be limited to the period between November 1 and March 31. (The time window would be narrower for the area within 50 feet of the Brook, but that area will not be part of this harvest.)

The lot contains no other critical habitats or known rare or endangered species, and no vernal pools. Beavers have had a substantial impact on Muddy Brook, altering the hydrology and killing hardwoods on the banks. The uplands are home to a variety of wildlife including deer, turkey, coyote and moose.

FIGURES

Figure 1. Forest Cutting Plan

Figure 2. Pre-Harvest Photographs, 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 124-762-15 Case No. _____
 Date Rec'd 5-20-15 Nat. Hert. Yes /
 Earliest Start 6-10-15 Nat. Hert. Imp. Yes
 River Basin Chicopee Pub. Dr. Wat. No
 Gen. Obj. LT ACEC No

Location

Town Hardwick
 Road Mellon & Greenwich Roads
 Acres 46 Proposed Start Date June 2015
 Vol. MBF 104 Vol. Cds. 103 Vol. Tons 65

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
 Town, State, Zip Belchertown, MA 01007
 Phone 413-323-6921 ext. 553 / 978-544-6343
 Ch61 61A 61B Stew *Case # _____
 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.

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

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

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

- Please see attached
NHESP renew
* The 300' buffer has been
flagged

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			

Site Information

Best Management Practices

Codes

Forest Products

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	56.5	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	25.3
Hemlock		Black Oak	12.1
Spruce		White Oak	9.0
Other Sftwd.		Other Hdwd.	1.3
White Ash		Total Mbf	104.2
Beech		Cordwood (Cds)	103
White Birch		SW Pulp (Tons)	65
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.

Stand Treatment

Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	WO			
Acres	46			
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 1/2 acre.

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.

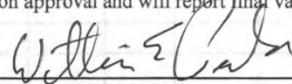
LT - Long-term Forest Management

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.


 Signature of landowner(s)

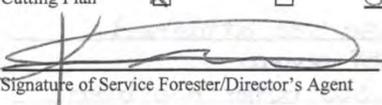
5-20-15
 Date

Service Forester

Determination and Status

Approved Disapproved Expires 5/20/2017

Cutting Plan


 Signature of Service Forester/Director's Agent

6/25/2015
 Date

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

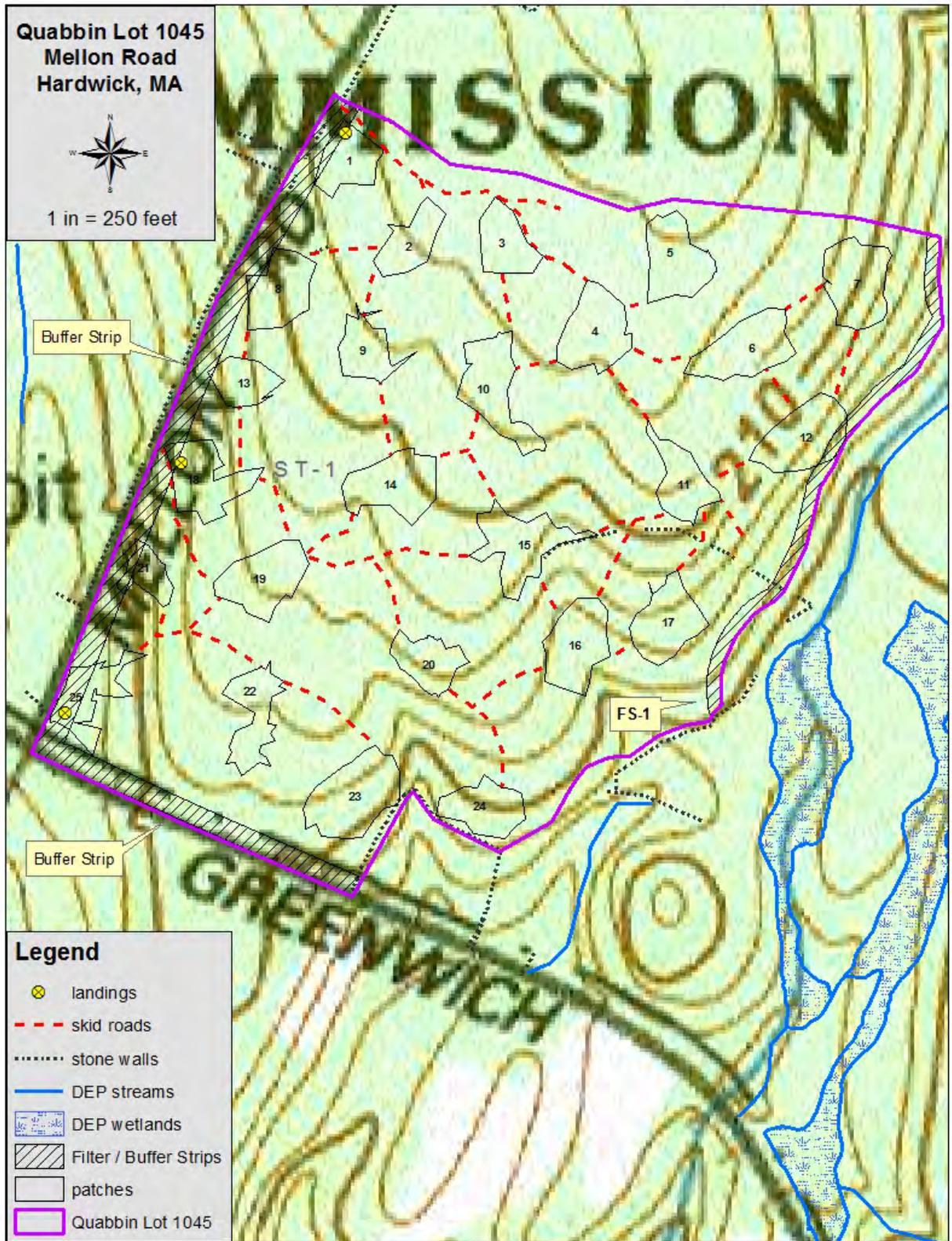
Codes

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.		
		Intermediate Harvests:	
		CT Commercial Thin	
		NT Non Com Thin	
		Non-Standard Systems*:	
		HG Highgrade*	
		DL Diameter Limit*	
		OT Other*	

Quabbin Lot 1045
Mellon Road
Hardwick, MA



1 in = 250 feet







Division of Fisheries & Wildlife

Jack Buckley, *Director*

Kate Marquis
Department of Conservation and Recreation
355 West Boylston St.
Clinton, MA 01510

Cutting Plan No. 124-7622-15
NHESP Tracking No. 15-34530
Town Hardwick
Road Mellon & Greenwich Road
Landowner DCR- DWSP
Preparer Helen Johnson
Date June 12, 2015

Dear Kate,

The Natural Heritage and Endangered Species Program (NHESP) of the Massachusetts Division of Fisheries and Wildlife (hereinafter "the Division") has reviewed the above-referenced Forest Cutting Plan (hereinafter "the Plan") pursuant to the special approval procedures of the Forest Cutting Practices Regulations (304 CMR 11.04(6)). Based on details of the Plan and information in the NHESP database, the Division has determined that there is potential for activities proposed in the Plan to result in "Take" (as defined in 321 CMR 10.02) of Wood Turtle (*Glyptemys insculpta*), a species listed as Special Concern pursuant to the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00).

Local populations of Wood Turtle are centered on perennial streams, rivers, and associated ponds and swamps, where individual turtles spend the winter months relatively dormant under the banks or at the bottoms of the wetlands. During early spring, Wood Turtles become more active and begin to spend time on land. Terrestrial habitats used during spring-fall include upland forests, shrublands, and fields, where the turtles seek food and appropriate shelter. Although recent research suggests that most individuals inhabit areas <330 feet from a wintering stream or wetland, some individuals will stray much farther (e.g., >1,000 feet) to reach preferred field habitat or suitable nesting habitat (i.e., open areas with loose or exposed soil). Most nesting in Massachusetts occurs during June, with hatching turtles dispersing through uplands in search of wetlands during late summer-fall. Presence of Wood Turtles is not always observable, as individuals may spend periods of time hidden under vegetation, logs, leaf litter, or other ground-level substrates.

Muddy Brook and the upland forest area surrounding the Brook is classified as known habitat of Wood Turtle. Timber harvesting at the site may actually improve upland habitat conditions for Wood Turtle, but the Division is concerned that direct mortality of individual turtles (e.g., as a result of crushing by motorized vehicles) will occur if the harvest is not conducted at an appropriate time of year. **Therefore, to avoid prohibited Take of Wood Turtle, the Division requests that the following language be added to the Plan prior to its approval:**

- Operation of motorized vehicles within 0 - 50' of Muddy Brook shall be conducted only during the time period beginning November 15 and ending February 28, of any year.
- Operation of motorized vehicles within 50 - 300' of Muddy Brook shall be conducted only during the time period beginning November 1 and ending March 31, of any year.

The practice listed above is designed to coordinate operation of motorized vehicles at the site with a time of year that Wood Turtles are unlikely to be present in preferred upland habitats.

Additionally, the Division requests that the boundaries of 300' buffer be flagged (e.g., with paint or flagging) and inspected prior to approval of the Plan, unless the following condition is met and incorporated into the Plan:



NHESP No. 15-34530

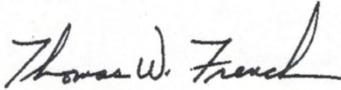
June 12, 2015

page 2 of 2

- The boundaries of the 300' buffer need not be marked if timber harvesting operations across the entire site occurs during the above requested time of year for operation within the 300' buffer (i.e. November 1 –March 31).

Please copy the Division on any proposed amendment, extension and on the approved Plan for the site. If you have any questions about this letter, please contact Brent Powers at (508) 389-6354.

Sincerely,



Thomas W. French, Ph.D.
Assistant Director

Cc: Hardwick Conservation Commission (via e-mail)

dcf



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

FILE # 124-7622-15

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 485 Ware Rd Belchertown in accordance with the
(Name of Owner) (Address) MA 01007

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

Mellen t lot.
Greenwich RD

Approval Date 6/25/2015

Director's Agent Kate Marquis
DCR Phone No. (413) 992-8734

ISSUED BY:

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

Figure 2: Pre-Harvest Photographs, A-B (June 2015)



A. Looking north. Note orange stripe on tree to be retained at edge of opening.



B. Same opening as Photo A, looking west. Mellon Road is in the background. White pine on left is to be retained. Note leaning sapling on right, which also shows on the left side of photo A.