

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: 3142
DCR Forest Cutting Plan File Number: 204-8070-16

Site Information

Watershed: Quabbin	Town(s): New Salem
Acres: 47	Nearest Road: Route 202, Gate 29
Natural Heritage Atlas overlap?: No	Public Drinking Water Supply Watershed?: Yes
Forest Types: White Pine/Hemlock/Oak	ACEC?: No
Soils: Gneiss and Schist derived well drained tills	
Wetland Resources: Yes	
Vernal Pools: One	

Harvest Information

Harvest Start Date: April 12, 2016	Harvest End Date: June 29, 2018
Number of Wetland Crossings: None	Number of Stream Crossings: 1

Best Management Practices Applied

Stream Crossings	temporary bridge
Filter Strips	1 fifty foot wide
Wetland Crossings	None
Harvesting in Wetlands	None

DWSP Forester supervising this harvest
Name: Derek Beard
Forester License #: 14
Phone #: 978-544-6343

NARRATIVES

General Description/Forest Composition/History

The project is located west of the Bullard farm inside gate 29 and abuts a high tension power line to the north. The eastern half is composed of white pine, hardwood (mainly mixed oak) and hemlock. Ascending a west slope, the density of white pine drops and is mainly replaced by hardwood and hemlock. This western portion received a light selection harvest in 1995 with the objective of removing diseased hemlock. Resulting regenerating is mostly black birch that is concentrated in skid trails. A portion of the 1995 harvest overlapped with a 1980 harvest completed in the north central part of the area. The overlap section has greater regeneration diversity (black birch, white pine and hemlock). As noted in 1995, the hemlock continues to be plagued by various invaders (elongate scale, adelgid and looper) resulting in overall decline and mortality. Although forest for the past 80 to 100 years; features on the landscape suggest an agricultural past.

Site Selection

The primary goal of the watershed forest management program is to create and maintain a forest that provides high quality drinking water to current users and future generations. In order to achieve this, DWSP has determined that the forest should contain a diversity of species in various stages of development (seedlings through large legacy trees). In addition, the forest should be vigorous; actively growing and regenerating. Forest in this condition is ideally suited to be resilient to and quickly recover from small and large scale disturbances such as disease, insect infestation, ice storms and hurricanes.

Diseased and dying hemlock coupled with an insufficient young forest layer indicates some regeneration cutting begin in order to trigger development of a healthier, more balanced and diverse forest structure.

Objectives

Reducing stocking of diseased hemlock, diversifying forest structure and spurring a medley of regeneration are the primary objectives of the project. This will be accomplished by making a series of forest canopy openings randomly spaced through the area. Specifically, there are 11 openings covering 7 of the 47 acres with an average opening size of 0.6 acres. Openings greater than 0.5 acres have some retained canopy trees that will contribute to the long term forest complexity of the area.

Cultural Resources

The project is home to number of interior stone walls that likely bound areas used for crop production or pasture. Old agricultural ditches drain some of these walled areas. They also link the wetland areas within the project. Clearly the farmers wanted to access these areas as soon as possible following winter. The area is also home to a Continuous Forest Inventory (CFI) plot. These plots were established in 1960 and forest measurements have been recorded from them every decade through 2010. Over time these plots (and the data from them) will be an invaluable resource in tracking of forest change.

Wildlife Resources

The north central part of the project is home to classic vernal pool. Maintaining unique habitats, like vernal pools, is a primary goal when performing forestry operations. To that end no harvesting occurs within 15 feet of the pool; a shaded or thinned condition is maintained within 100 feet of the pool; and no significant rutting is permitted within 200 feet of the pool.

Figure 1. Approved forest cutting plan

Figure2. 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 201-870-16 Case No. _____
Date Rec'd 2/8/16 Nat. Hert. No
Earliest Start 2/24/16 Nat. Hert. Imp. N/A
River Basin Chicopee Pub. Dr. Wat. Quabbin
Gen. Obj. LT ACEC Ab

Site Information

Location TIMBER LOT 3142

Town New Salem
Road Millington Rd. (Gate 29)
Acres 47 Proposed Start Date _____
Vol. MBF 82.4 Vol. Cds. 100 Vol. Tons 456

Plan Preparer

Name Derek Beard
Address DCR – Div. of Water Supply Protection
21 Elm St.
Town, State, Zip New Salem, MA 01355
Phone 978-544-6343
Type of Preparer LF
*Mass. Forester License # 14
*Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name DCR – Division of Water Supply Protection
Mailing Address 485 Ware Rd.
Town, State, Zip Belchertown, MA 01007
Phone 412-323-6921
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

Indicate location on map	SC-1	SC-2	SC-3	SC-4
Type of Crossing	BR			
Existing Structure	N			
Type of Bottom	ST			
Bank Height (ft)	≤1'			
Stabilization	CO			

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)	50'			

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.
TH Lic. Tim. Har	BR Bridge	MU Mulch	DR Dry	ST Stony	Some forestry activities, such as prescribed burning and pesticide or fertilizer application may require additional permits.
TB Timber Buyer	FO Ford	CO Corduroy	OT Other	MU Mud	Consult MA Forestry BMP Manual for further information.
LO Landowner	PO Piled	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*

TIMBER LOT 3142

*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.

Forest Products

Species	Mbf/Cds		Mbf/Cds
White Pine	47.3	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	11.2
Hemlock	18.5	Black Oak	2.1
Spruce		White Oak	1.6
Other Sftwd.		Other Hdwd.	.8
White Ash		Total Mbf	82.4
Beech		Cordwood (Cds)	100
White Birch		SW Pulp (Tons)	456
B & Y Birch	.9	HW Pulp (Tons)	
Black Cherry		Chips (Tons)	

Stand Treatment

Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	HH	WP		
Acres	25	22		
Landowner Objective	LT	LT		
Designation of Trees	CT	CT		
Type of Cut	SE	SE		
Source of Regeneration	SE/AD	SE/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 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.

William E. Pala
 Signature of landowner(s)

1-4-16
 Date

Determination and Status 204.8070.16

Approved Disapproved Expires 2/8/18
2/18/16
 Signature of Service Forester/Director's Agent Date

Extension 1 2 Expires 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

Service Forester

Codes

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

Town New Salem

File Number 204-8070

TIMBER LOT 3142

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.

This harvest is an aggregation of 11 canopy openings (patches) spread across 47 acres. Opening size ranges from 0.3 to 1.0 acre with an average of 0.6 of an acre. The 11 openings cover a total of 7 acres. Openings greater than 0.5 acres have between 3 and 10 square feet of residual basal area also known as green tree retention. Trees to be harvested in openings are marked with orange paint. Trees within main skid roads are marked with blue paint. The project is home to a vernal pool. To maintain the integrity of the pool and adjacent habitat, no harvesting has been designated inside 100 feet from the high water mark of the pool.

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

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

Department of Conservation & Recreation
 Timber Lot 3142 Located in New Salem - 47 acres
 Quabbin Reservoir Watershed
 Division of Water Supply Protection
 300

300 Feet

To Gate 29

High Tension Power Line

ST-1
 HH
 25 ac.

ST-2
 WP
 22 ac.

SC

FS-1



Bullard's Corner

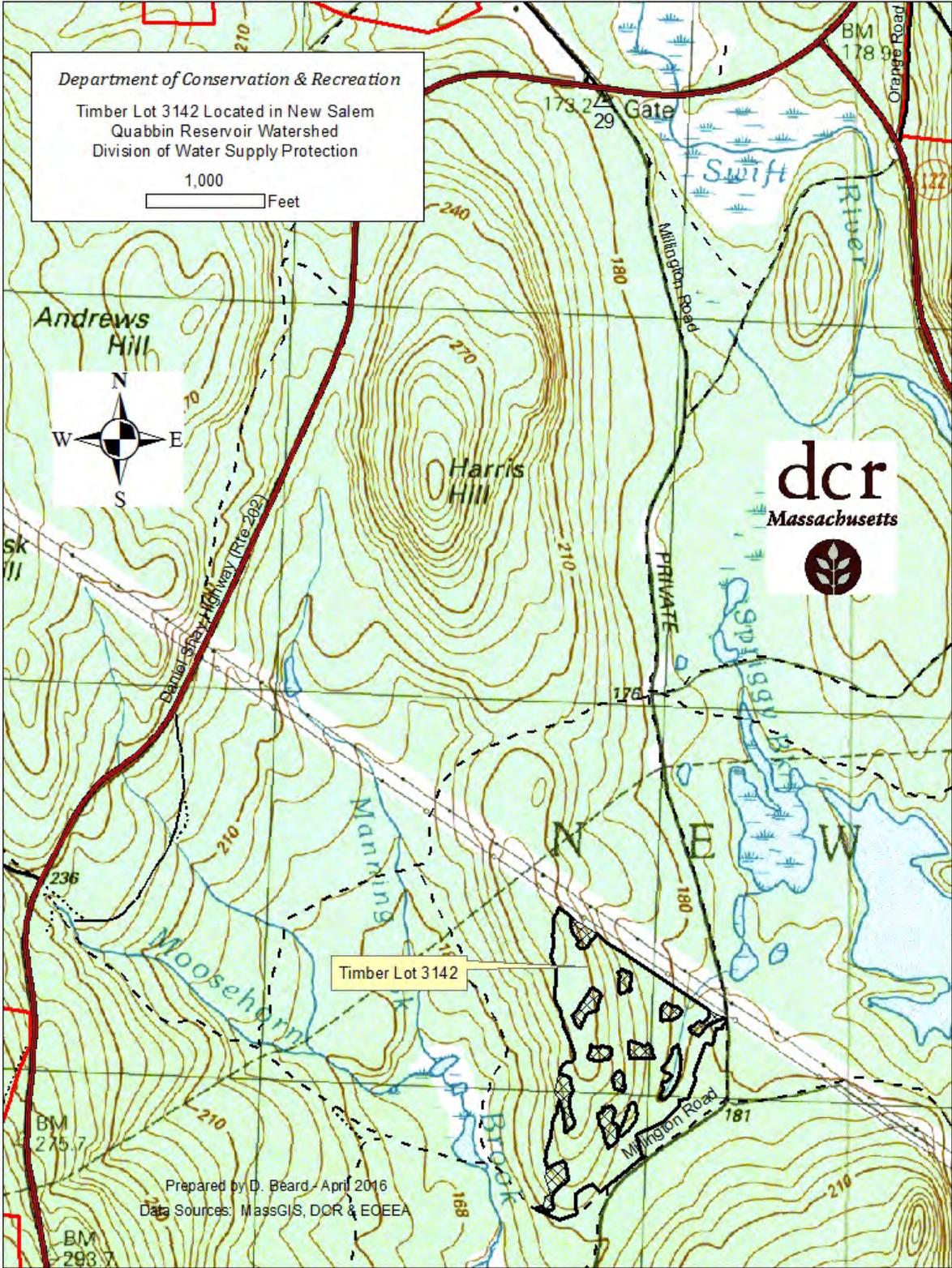
Legend

- - - - - Access Road
- ▭ Harvest Boundary
- ▨ Opening
- · - · - Forest Type Boundary
- ⊕ Landing
- · - · - Skid Road
- Stream Crossing
- · - · - Intermittent Stream
- ▨ Filter Strip
- ▨ Wetland
- + Vernal Pool
- Cellar Hole
- - - - - Old Agricultural Ditch
- — — — — Stone Wall
- ▨ Old Gravel Pit
- ◆ CFI Plot



Prepared by D. Beard - Jan. 2016

Data Sources: MassGIS, DCR & EOEEA



Department of Conservation & Recreation
Timber Lot 3142 Located in New Salem
Quabbin Reservoir Watershed
Division of Water Supply Protection
1,000
Feet



Timber Lot 3142

Prepared by D. Beard - April 2016
Data Sources: MassGIS, DCR & EOEEA

dcf



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

FILE # 204-8070-16

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
(Name of Owner)

Ware Rd, Belchertown
(Address) in accordance with the

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

Timber Lot 3142^{ot.}, New Salem

Approval Date 2/18/16

Director's Agent Fletcher Clark

DCR Phone No. (413) 262-2367

ISSUED BY:

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

Figure 2: Pre Harvest Photographs, A



This picture is on the edge of a retention area (area where trees will not be cut) with in a planned canopy opening or patch. In the center of the frame is a fairly large white oak snag (dead standing tree). Snags are important habitat for a diversity of wildlife and add to forest complexity.

Figure 2: Pre Harvest Photographs (Cont.), B



This is a planned canopy opening on the edge of a high tension power line. The perpetual young flora maintained along power lines (known as early succession habitat) tends to attract an array of wildlife, particularly birds, for nesting, foraging and cover. This opening will help diversify the overall forest structure of the area and expand upon the power line corridor providing early succession habitat for at least 10 to 15 years.