

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: 1048
DCR Forest Cutting Plan File Number: 309 8111 16

Site Information

Watershed: Quabbin	Town(s): Ware
Acres: 12	Nearest Road: Quabbin Park East Entrance
Natural Heritage Atlas overlap?: No	Public Drinking Water Supply Watershed?: Yes
Forest Types: Red pine and mixed pine, oak and hardwood.	ACEC?: No
Soils: Scituate and Canton fine sandy loams, extremely stony	
Wetland Resources: One stream crossing to access north landing.	
Vernal Pools: None on lot.	

Harvest Information

Harvest Start Date: 4/26/2016	Harvest End Date:
Number of Wetland Crossings: None	Number of Stream Crossings: One

Best Management Practices Applied

Stream Crossings: There is one stream crossing where a portable bridge will be used.
Filter Strips: Variable width filter strip used.
Wetland Crossings: There are no wetland crossings.
Harvesting in Wetlands: There is no harvesting in wetlands.

DWSP Forester supervising this harvest
Name: Steven Wood
Forester License #: 257
Phone #: 413-323-6921 ext. 156
Email: Steven.Wood@state.ma.us

NARRATIVES

General Description/Forest Composition/History:

The area to be harvested is in the town of Ware.

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. The 2 areas with red pine were planted around 1940.

The primary tree species present are red pine and white pine. There is also an area of mixed oak hardwood and pine. Hardwoods present include red, black and white oak, black and paper birch, red maple, ash, and hickories.

The red pine is starting to decline. It became infected with an exotic insect pest, red pine scale, around 2012. The scale can kill a tree in just a couple of years. Secondary pathogens have also come in including borers and root rot. The area to the west of this harvest was heavily infested with gypsy moth in 2015 and many egg masses are present in this stand currently so it is expected that the hardwoods will be defoliated later this spring. Fortunately it usually takes 3 total defoliations for mortality to occur in the hardwoods. There are several naturally occurring agents that have become established that usually cause the gypsy moth population to crash before multiple successive years of defoliation occurs.

Past harvests here include a firewood thinning completed in 1986 and a group selection harvest of some of the red pine in the stand along the road completed in 2007.

The soils on this lot are Scituate fine sandy loam and Canton fine sandy loam, both extremely stony. These are loamy glacial till soils underlain by sandy till on glaciated plains and hills. They range from moderately well drained (Scituate) to well drained (Canton).

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. A forest in this condition is resilient to and can quickly recover from small and large scale disturbances such as diseases, insect infestations, ice storms and hurricanes.

Silvicultural Objectives:

The goal of this harvest is to build on the success of the work started in 1986 and 2007 by continuing the process of establishing new tree seedlings and providing space for existing regeneration to expand and grow. The diversity of native species present is being maintained. This combination of structural and species diversity builds resistance and resilience into the forest.

Guided by the principles stated above, the primary purpose of this harvest is the establishment of a new age class by harvesting part of the overstory in groups, up to 3.6 acres in size, in order to foster regeneration. Groups were placed according to our guidelines. Areas where there were clusters of trees that were declining or had weak stem form, often due to insects, diseases, or storm damage, were specifically targeted. These vulnerable trees will be replaced with vigorous new seedlings, or with saplings where there is existing regeneration to be released. Where groups of regeneration created from the previous cut were present they were expanded upon by creating a new abutting group.

Wherever possible wildlife habitat features were maintained and protected, such as snags (dead trees) and trees with cavities or nests.

Cultural Resources:

Stone walls are numerous throughout this area. There are many breaks and barways in these walls and they can easily be used to avoid and protect the stone walls during the upcoming harvest. This is in keeping with DWSP's standard practice, which dictates that every effort is made to keep existing stone walls intact. There are several cellar holes near the harvest and they will be avoided. Also there is a well on the edge of the main stand, this is flagged and will be protected. 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 lot contains no critical habitats or known rare or endangered species, and no vernal pools. The area is home to a variety of wildlife including deer, turkey, coyote and bobcat.

FIGURES

Figure 1. Forest Cutting Plan

Figure 2. Pre-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) 03-07-16P12:56 RCVB

For DCR Use Only:

File Number 3A-811-16 Case No. _____
Date Rec'd 3-7-16 Nat. Hert. N
Earliest Start 3-22-16 Nat. Hert. Imp. N
River Basin CHICOPEE Pub. Dr. Wat. QUABBIN
Gen. Obj. LT ACEC N

Site Information

Location

Town Ware Lot 1048
Road Quabbin East Entrance
Acres 12 Proposed Start Date 5/1/16
Vol. MBF 88.2 Vol. Cds. 47 Vol. Tons 133

Plan Preparer

Name Steven J. Wood
Address DCR, Division of Water Supply Protection
485 Ware Rd.
Town, State, Zip Belchertown, MA 01007
Phone (413) 323-6921 ext. 156
Type of Preparer Mass. Licensed Forester
*Mass. Forester License # 257
*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 (413) 323-6921
Ch61 Ch61A Stew *Case # _____
Est. Stumpage Value 6500

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	PBR			
Existing Structure	no			
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)				

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
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

Notes:
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	17.9	Red Maple	3.7
Red Pine	65.0	Sugar Maple	
Pitch Pine		Red Oak	0.6
Hemlock		Black Oak	0.6
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash	0.4	Total Mbf	88.2
Beech		Cordwood (Cds)	47
White Birch		SW Pulp (Tons)	133
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	RP			
Acres	12			
Landowner Objective	LT			
Designation of Trees	CT			
Type of Cut	SE/SA			
Source of Regeneration	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 specie

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.

[Handwritten Signature]
Signature of landowner(s)

3-4-16
Date

Determination and Status

309-8111-16

Approved Disapproved Expires 3/8/18

Cutting Plan *[Signature]* 3/11/16

Signature of Service Forester/Director's Agent Date

Extension 1 2 Expires 1 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

Forest Types

WP White Pine
WK WP/Hem
WH WP/Hdwd
WO WP/Oak
RP Red Pine
SR Red Spruce

HK Hemlock
HH Hem/Hdwd
BC Bck Cherry
BB Bee/Bir/Map
OH Oak/Hdwd
OR N Red Oak

OM Mixed Oak
RM Red Maple
BE Beech
SF Spruce/Fir
SM Sugar Maple
PP Pitch Pine

Designation of Trees

CT Cut Tree
LT Leave Tree
SB Stand Boundary
OT Other
Landowner Objective
LT Long-term Mgt.
ST Short-term Har.

Type of Cut

SH Shelterwood
ST Seed Tree
CC Clear Cut
SE Selection
SA Salvage
SN Sanitation

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

Source of Regeneration

AD Advanced
SE Natural Seed
PL Plant
CO Coppice
DS Direct Seed
OT Other

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

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

Town Ware

File Number 309-8111-16

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 a pre-salvage of red pine with some white pine and hardwoods on 2 separate stands which were previously thinned. The main 10 acre stand has a 0.4 acre and a 3.6 acre opening created, both of these have around 13 sqft of BA retained. There are also several unmapped 0.1 acre openings. The rest of the stands have most of the red pine cut along with additional, mostly poorer formed white pine and hardwoods marked to be cut. Cut trees are blue marked, some save trees are orange marked as are the edge trees on the openings. Area has had high browse impacts, most hardwood saplings are suppressed and poorly formed so are marked to be cut to get more vigorous sprouting. May use existing remote landing.

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.

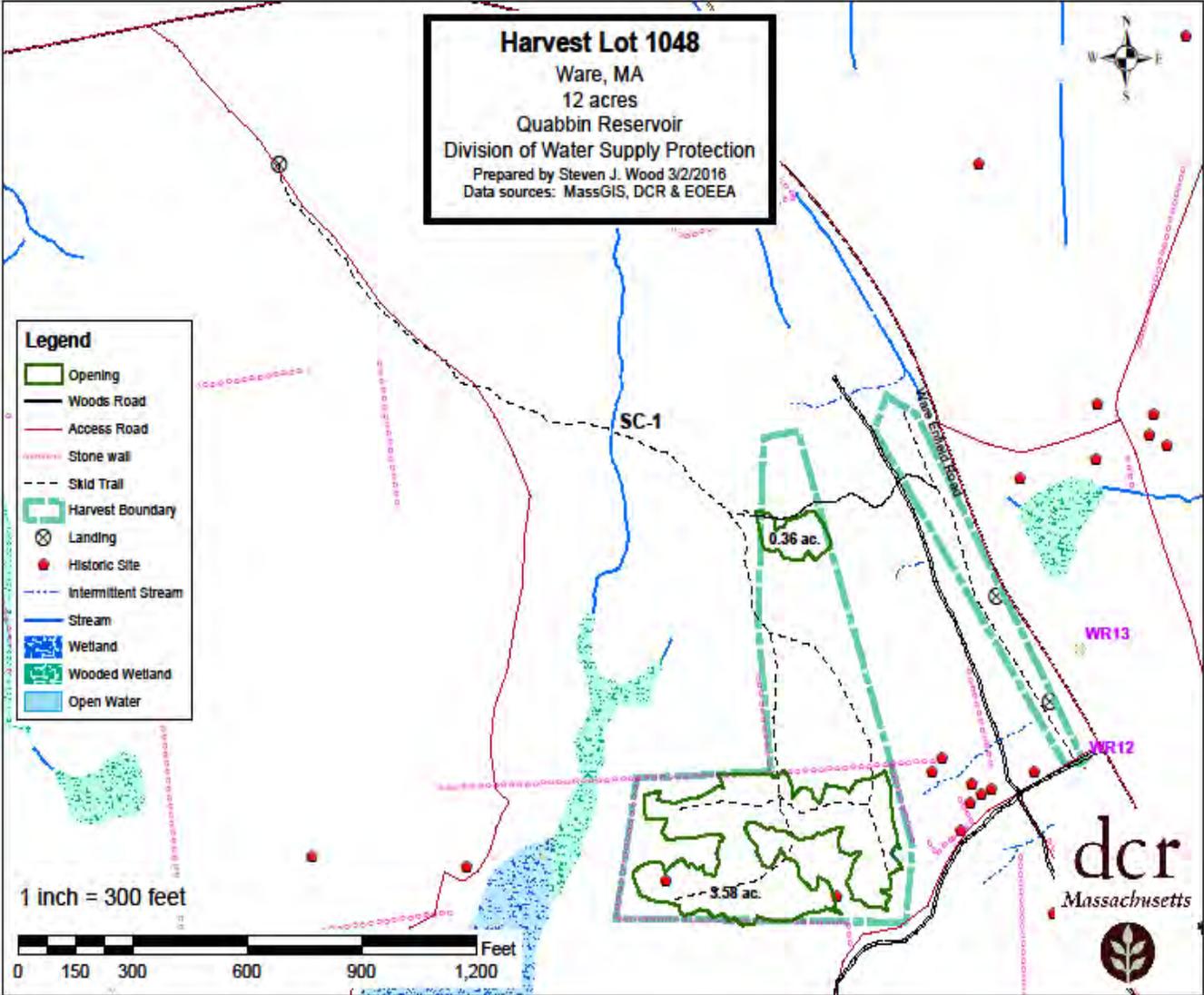
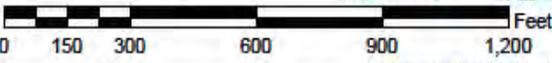
Stand No.	Source of Regeneration (ex. AD, SE)	How will Regeneration be obtained/protected? If using AD - Describe the species present and how the regeneration will be protected If using SE - Describe the source of the seed and the number of seed trees/acre

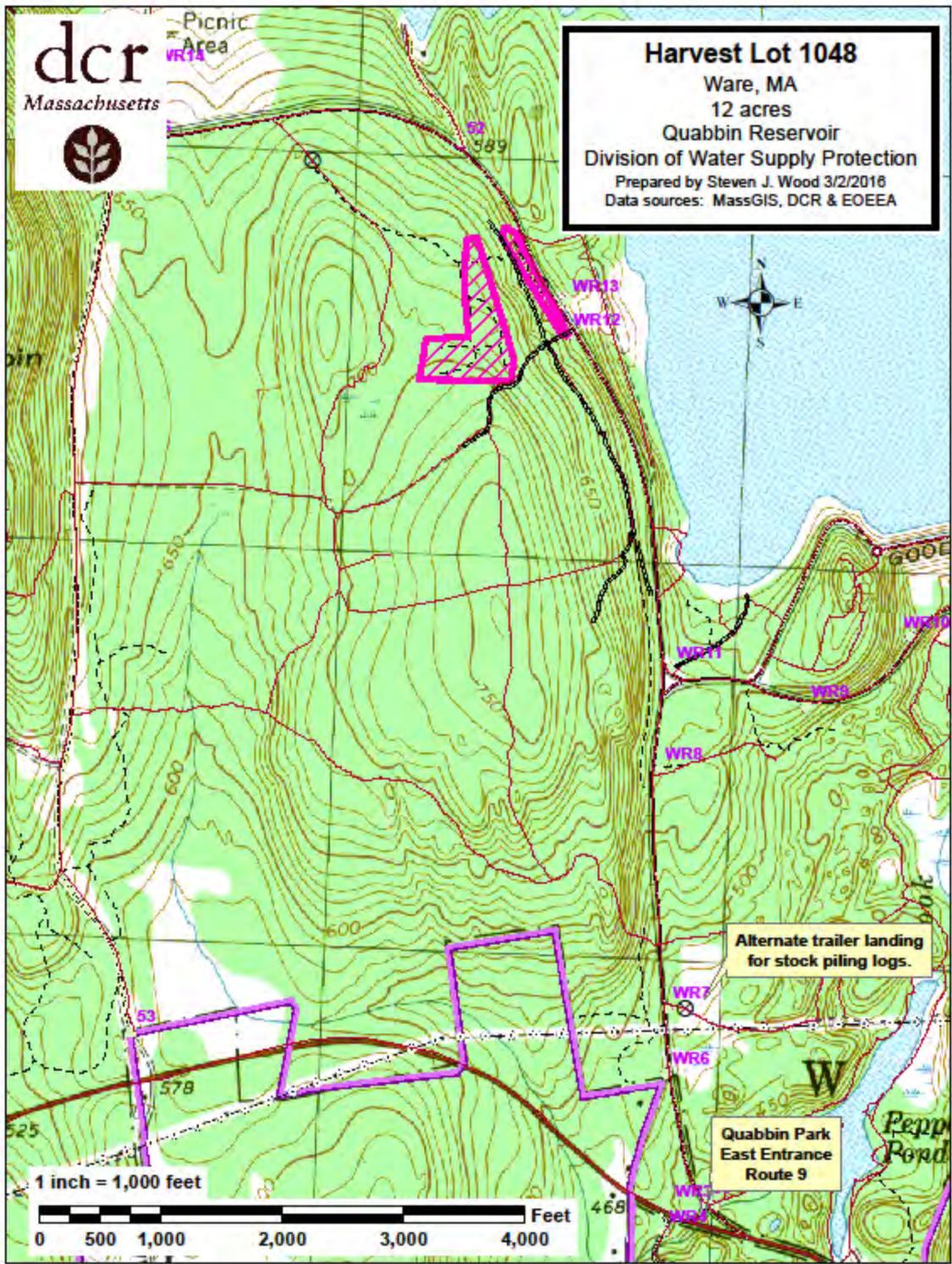
Stand No. **Desired Future Condition**
Describe what the stand is expected to look like five years from the harvest, including the condition of the overstory & understory

Harvest Lot 1048
Ware, MA
12 acres
Quabbin Reservoir
Division of Water Supply Protection
Prepared by Steven J. Wood 3/2/2016
Data sources: MassGIS, DCR & EOEEA

- Legend**
- Opening
 - Woods Road
 - Access Road
 - Stone wall
 - Skid Trail
 - Harvest Boundary
 - Landing
 - Historic Site
 - Intermittent Stream
 - Stream
 - Wetland
 - Wooded Wetland
 - Open Water

1 inch = 300 feet



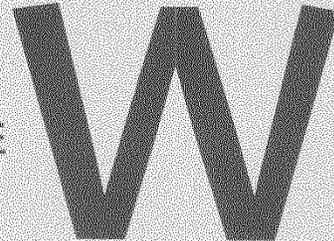


dc



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

FILE # 309-8111-16



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)

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 East lot.
Entrance, Lot 1048, Ware

Approval Date 3/11/16

Director's Agent Doug Hutcheson

DCR Phone No. (413) 545-7020

ISSUED BY:

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

Figure 2: Pre-Harvest Photographs A, B & C

A.



Eastern edge of main stand, note declining overstory pines and established white pine regeneration.

B.



Deer (center of photo) north of landing just off park road.

C.



Dying red pines along park road near landing.