

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

**Project Title:**

<b>DWSP Harvest Permit Number:</b> 1047
<b>DCR Forest Cutting Plan File Number:</b> 024-8138-16

**Site Information**

<b>Watershed:</b> Quabbin	<b>Town(s):</b> Belchertown
<b>Acres:</b> 31.8	<b>Nearest Road:</b> Blue Meadow, Ware Rd (rte 9)
<b>Natural Heritage Atlas overlap?</b> : Yes, but no restrictions.	<b>Public Drinking Water Supply Watershed?:</b> Yes
<b>Forest Types:</b> Red pine, mixed red & white pine	<b>ACEC?:</b> No
<b>Soils:</b> Canton, Hinckley and Scituate loamy to fine sandy loam, Charlton-Hollis rock outcrop	
<b>Wetland Resources:</b> Sections abut wetlands/small streams and Swift River.	
<b>Vernal Pools:</b> None on lot, 2 are nearby.	

**Harvest Information**

<b>Harvest Start Date:</b> 8/15/16	<b>Harvest End Date:</b> 9/19/16
<b>Number of Wetland Crossings:</b> None	<b>Number of Stream Crossings:</b> One

**Best Management Practices Applied**

<b>Stream Crossings:</b> One existing culvert in permanent gravel road.
<b>Filter Strips:</b> Variable width filter strip used.
<b>Wetland Crossings:</b> There are no wetland crossings.
<b>Harvesting in Wetlands:</b> There is no harvesting in wetlands.

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

## **NARRATIVES**

### **General Description/Forest Composition/History:**

The area to be harvested is in the town of Belchertown and comprises 5 different areas from the Swift River west to Cold Spring Rd. near the power line north of gate 2-1. All the stands are red pine plantations that have been cut at least twice previously. Note that stand 7 on the cutting plan map (3.5 acres by the Swift River) was added after the original lot proposal was written. This is a stand that was originally missed as containing red pine but still fit with all aspects of the proposal and fit well with this timber sale. This addition was approved by all appropriate DWSP personnel.

The stone walls on this lot attest to its history of clearing for agriculture, mostly for pasture. These red pine plantations were most likely established on abandoned pastures in the 30's and 40's.

The primary tree species present are red pine with some white pine and scattered mixed oak (predominately red oak). Other hardwoods include black and paper birch, red maple, ash, and hickory but these mainly occur on the edge of the plantation or where the original planting wasn't successful.

The soils on this lot are primarily sandy loams, Canton, Hinckley and Scituate. In the Stewardship Forest section there is a steeper section that is classified as Charlton-Hollis rock outcrop. All are well drained and workable for most of the year.

### **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.

Red pine is generally considered a non-native species to MA and one of our goals has been to convert these stands to native species. Recently they have also been attacked by an exotic insect pest the red pine scale and another pest, the southern pine beetle, was discovered in CT this spring. The outlook for red pine surviving in this area is very poor and the species no longer meets our objectives of having "a diverse mix of healthy trees that are long-lived, well-suited to their location, and vigorously growing and assimilating nutrients".

### **Silvicultural Objectives:**

The goal of this harvest is to build on the success of the work started in the previous harvests 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 and should be greatly enhanced. 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 the remaining overstory of red pine. Since most of these areas were

previously cut there is already various aged regeneration present. Where this advanced regeneration is still vigorous and well formed it will be protected as much as possible during the harvest. There are areas with sapling and poled sized sugar maple and white pine that were marked specifically to be protected and released. The resulting stands should have at least 2 age classes and be much more diverse. Most of these stands won't need treatment again till the thinning/regenerating process is started again.

Wherever possible wildlife habitat features were maintained and protected, such as snags (dead trees) and trees with cavities or nests. Exceptional individuals of all species present were retained in the stand for seed and to enhance diversity.

### **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. There are also several cellar holes in the Stewardship Forest section, these have been flagged and are easily avoidable. This is in keeping with DWSP's standard practice, which dictates that every effort is 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:**

Part of opening 7 and 11 are within a habitat "bubble" designated for protection by the Natural Heritage and Endangered Species Program (NHESP). NHESP has determined that no additional restrictions are needed.

The lot contains no other critical habitats or known rare or endangered species, and no vernal pools. The uplands are 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 3. One year after harvest Photographs D & E**

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)

93-23-16P01:14

## For DCR Use Only:

File Number 024 8138-16 Case No. \_\_\_\_\_  
Date Rec'd 3/23/16 Nat. Hert. Y  
Earliest Start 4/7/16 Nat. Hert. Imp. N  
River Basin CHICOPSEE Pub. Dr. Wat. QUABBIN  
Gen. Obj. LT ACEC N

Site Information

### Location

Town Belchertown Quabbin Lot 1047  
Road Windsor Dam, Blue Meadow Roads  
Acres 31.8 Proposed Start Date 4/15/16  
Vol. MBF 285.2 Vol. Cds. 47 Vol. Tons 330

### 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 18000

### 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	CU ex			
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	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

NO NHESP RESTRICTIONS --  
SEE ATTACHED LETTER

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

pg 1 of 6

## Products to be Harvested\*

Species	Mbf/Cds		Mbf/Cds
White Pine	59.8 M	Red Maple	
Red Pine	215.2 M	Sugar Maple	
Pitch Pine		Red Oak	4.0 M
Hemlock		Black Oak	4.6 M
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	1.7 M
White Ash		<b>Total Mbf</b>	285.2 M
Beech		<b>Cordwood (Cds)</b>	47
White Birch		<b>SW Pulp (Tons)</b>	330
B & Y Birch		<b>HW Pulp (Tons)</b>	
Black Cherry		<b>Chips (Tons)</b>	

\*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	RP4			
Acres	31.8			
Landowner Objective	LT			
Designation of Trees	CT			
Type of Cut	SE			
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 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. Pelt*

Signature of landowner(s)

*3-21-16*  
Date

## Determination and Status

*024-8138-16*

Approved Disapproved Expires

Cutting Plan ☒ ☐ *3/24/18*  
*4/12/16*

Signature of Service Forester/Director's Agent Date

*STE VISIT W/STERE WOOD* *3/25/16*

Extension ☐ ☐ 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]*

Signature of Service Forester/Director's Agent

*9/28/16*  
Date

## Forest Types

WP White Pine HK Hemlock OM Mixed Oak  
WK WP/Hem HH Hem/Hdwd RM Red Maple  
WH WP/Hdwd BC Black Cherry BE Beech  
WO WP/Oak BB Bee/Bir/Map SF Spruce/Fir  
RP Red Pine OH Oak/Hdwd SM Sugar Maple  
SR Red Spruce OR N Red Oak 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  
DL Diameter Limit\*  
OT Other\*

## 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

pg 2 of 6

# 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 Belchertown

File Number 004-8138-16

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.

Lot is marked with blue paint with some save and opening edge trees marked with orange paint. Lot contains 5 separate stands of mainly RP that

are in various stages of decline due to the red pine scale. Most of the areas have been previously cut and have advance regeneration (mainly WP)

present. Past treatments were variable in intensity and consistency but were usually small group selection with some thinning. On the areas which had

multiple entries this cut might more closely resemble a final overstory removal of a shelterwood. Goal is to remove as much of RP as possible before

it dies and establish a new age class of more diverse native species. Some healthy, vigorous well formed WP and hardwoods were retained.

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?

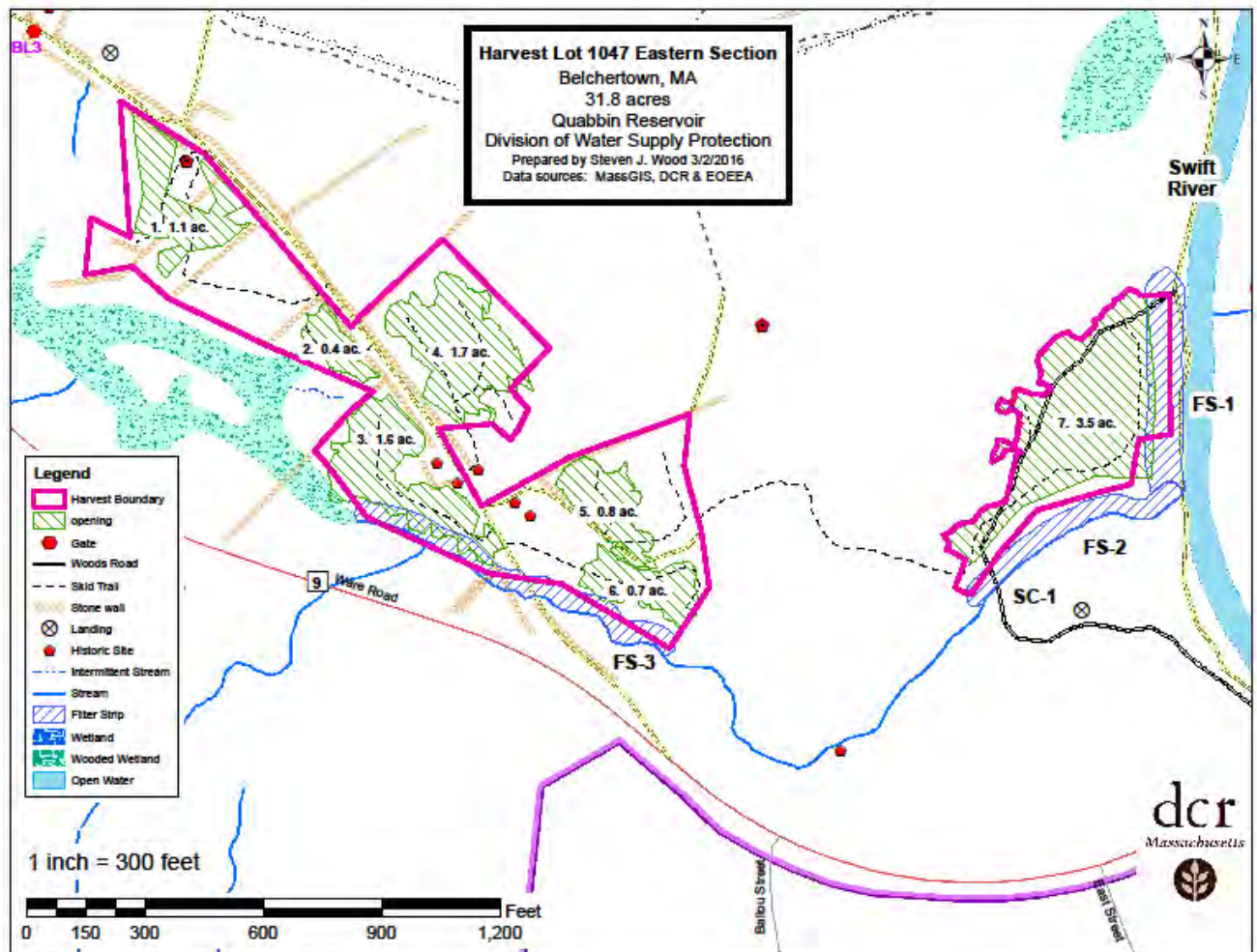
If using AD - Describe the species present and how the regeneration will be protected  
If using SE - Describe the source of the seed and the number of seed trees/acre

All	AD/SE	Existing well formed regeneration (mainly WP and SM) will be protected as much as possible.
		A new age class should be established from seed from surrounding trees and overall there will be 3 age classes present. Opening size ranges from 0.1 ac- 3.5 ac. with at least 10 sq. ft. of BA retained on openings over 0.5 acre. Due to nature of stand and past treatments openings won't be well defined (acceptable overstory and existing regeneration is variable). Stands surrounding cut areas range from being uncut to having multiple cuts over last 30 years but all are well stocked, healthy and more diverse than these RP plantations.
		Note : SC-1 is an existing culvert in a permanent gravel road. If the landing near it off the fisherman's access is not utilized then this crossing won't be needed, wood could be forwarded to main landing to the west.

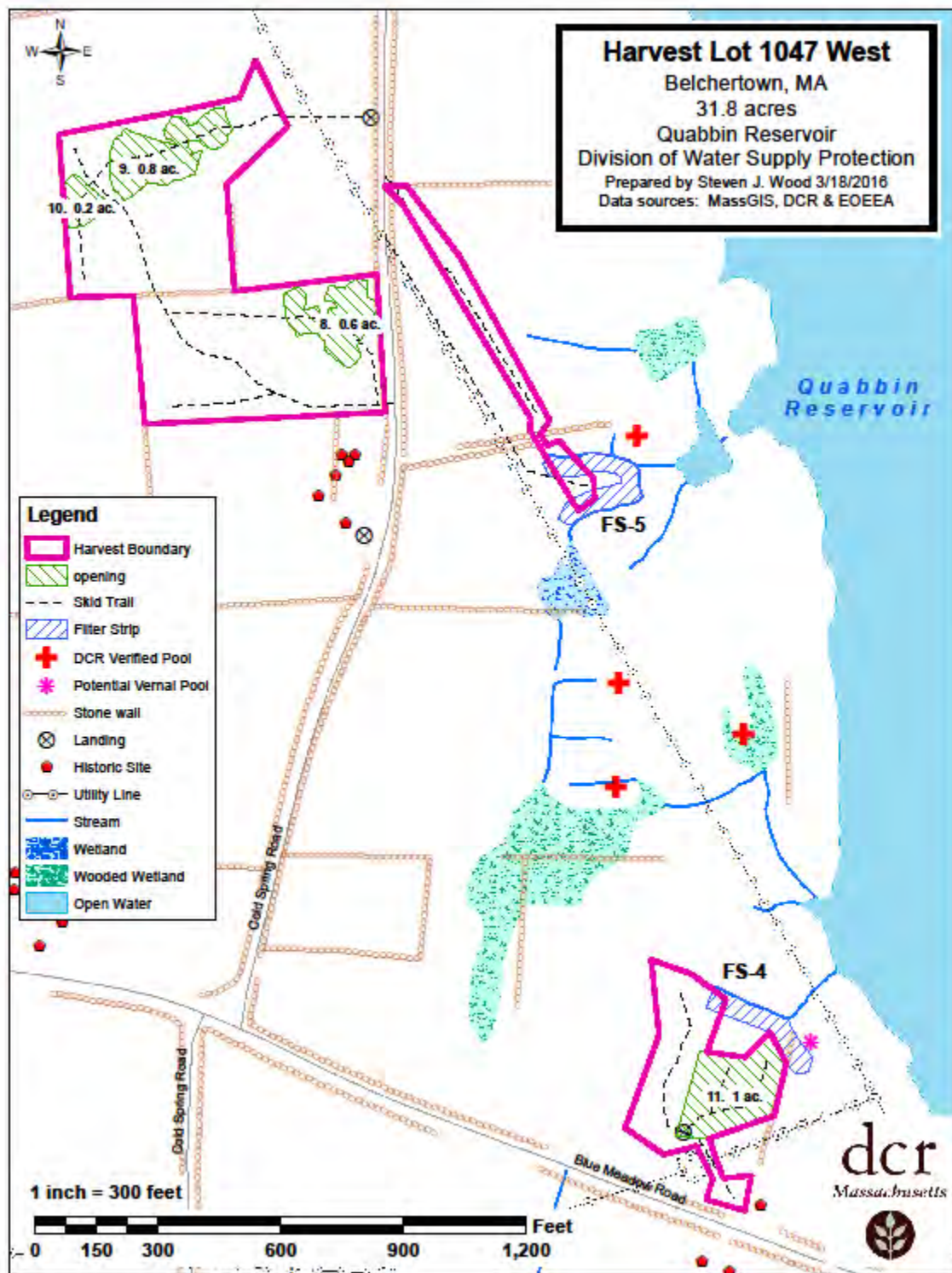
Stand No.

Desired Future Condition

Describe what the stand is expected to look like five years from the harvest, including the condition of the overstory & understory

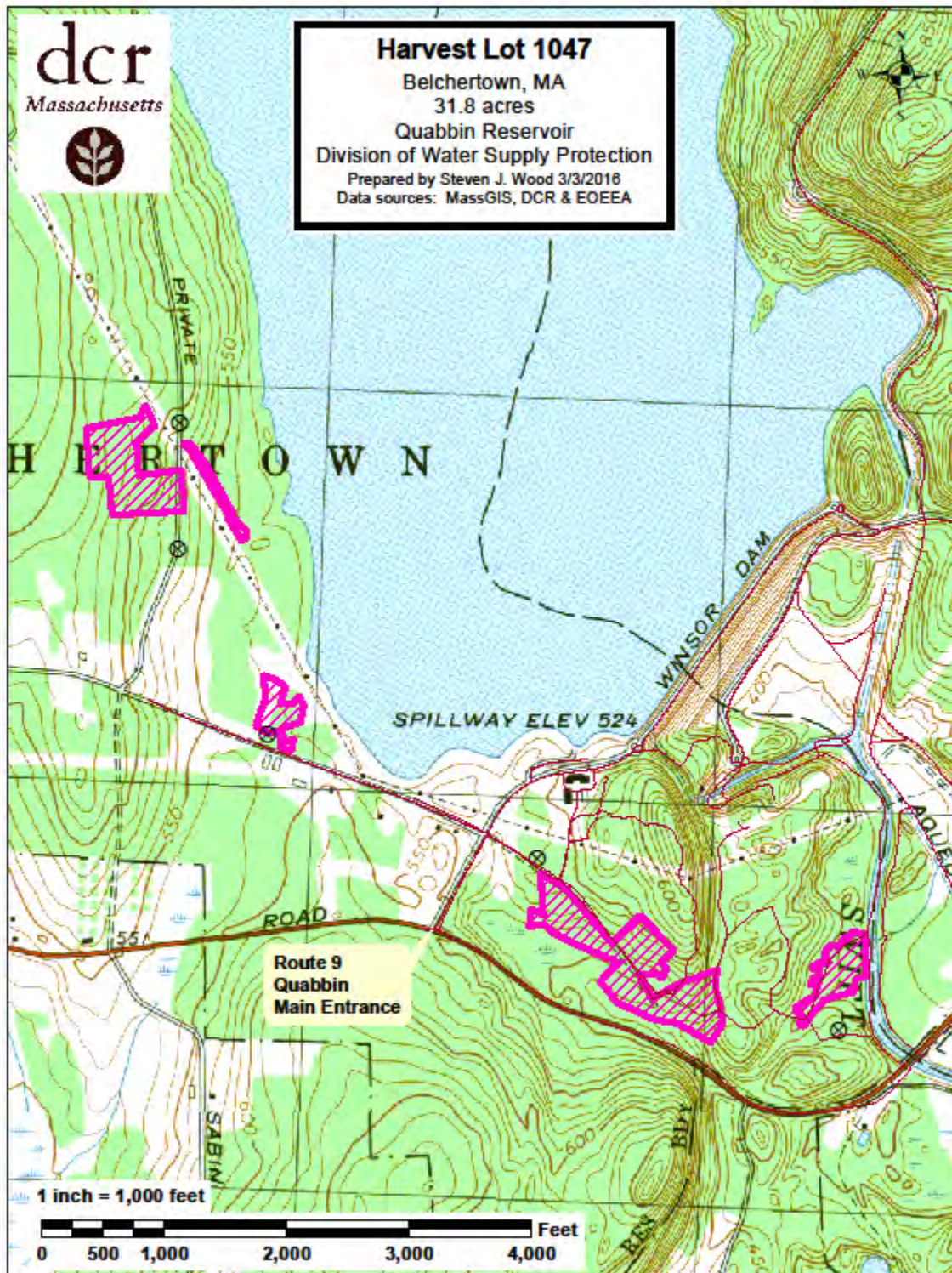








**Harvest Lot 1047**  
Belchertown, MA  
31.8 acres  
Quabbin Reservoir  
Division of Water Supply Protection  
Prepared by Steven J. Wood 3/3/2016  
Data sources: MassGIS, DCR & EOEEA





# Division of Fisheries & Wildlife

Jack Buckley, *Director*

Doug Hutcheson, Department of Conservation and Recreation  
40 Cold Storage Drive  
P.O. Box 484  
Amherst, MA 01004

Cutting Plan No.	024-8138-16
NHESP Tracking No.	05-18522
Town	Belchertown
Road	Off Windsor Dam Road
Landowner	DCR – DWSP
Preparer	Steven J. Wood
Date	April 11, 2016

Dear Doug,

The Natural Heritage and Endangered Species Program ("the NHESP") of the Massachusetts Division of Fisheries and Wildlife ("the Division") has reviewed the above-referenced Forest Cutting Plan ("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 does not expect activities proposed in the Plan to negatively impact Estimated Habitat or result in "Take" (as defined in 321 CMR 10.02) of plant or animal species protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). Therefore, the Division does not require that the Plan be modified at this time.

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: Belchertown Conservation Commission (via e-mail)





dc



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

FILE # 024-8138-16

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-PWSP 485 WARE RD BELCHERTOWN, MA 01007  
(Name of Owner) (Address) in accordance with the

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

# 1047 lot

Approval Date 4/12/16

Director's Agent DOUGLAS 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.**



Photo point 1 8/27/15 at road and trail/stone wall intersection, thick white pine regeneration in background.



B.



Photo point 2 taken 8/27/15. Note w. pine regeneration that is suppressed from being shaded for too long and storm damaged.



c.



Section of thick hardwood (mainly sugar maple) saplings and poles which will be protected during harvest.



**Figure 3. One year after harvest (7/31/17) photos D & E**

**D.**



Photo point 1 same view as photo A.

**E.**



Photo point 2 same view as photo B.