

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

Project Title: Gate 13 Red Pine
DWSP Harvest Permit Number: 2052
DWSP Proposal ID: PE-18-11-01
DCR Forest Cutting Plan File Number: 230-9323-18

Site Information

Watershed: Quabbin
Town(s): Pelham
Acres: 32.5
Nearest Road: Daniel Shays Highway
Natural Heritage Atlas overlap?: No
Public Drinking Water Supply Watershed?: Yes
Forest Types: White Pine, Oak/hardwood, Red Pine
Area of Critical Environmental Concern (ACEC)?: No
Soils: The dominant soil types are Canton or Scituate fine sandy loams.
Wetland Resources: none.
Vernal Pools: none known.

Harvest Information

Harvest Start Date: 7/29/2019
Harvest End Date: 9/3/2019
Number of Wetland Crossings: none.
Number of Stream Crossings: none.

Best Management Practices Applied

Stream Crossings: no stream crossings.
Filter Strips: all filter strips are variable width and determined by slope as directed by Massachusetts Best Management Practices.
Wetland Crossings: no wetland crossings.
Harvesting in Wetlands: none.

DWSP Forester supervising this harvest

Name: Richard MacLean & Herm Eck
Forester License number: #63 (Eck)
Phone number: 413-323-6921 x 553
Email: richard.maclean@mass.gov

Narrative

General Description/Forest Composition/History

The proposed lot is predominately white pine/hardwood with some small sections of red pine, and white pine/oak.

White pine/hardwood cover is distributed throughout and is well to densely stocked (~10 ft² sawlog / ac average). The white pine quality is moderate to poor, the best quality pine in the north close to Rte. 202. At the landing and south the forest is near monoculture white pine with little healthy regeneration. Hardwood species diversity is dominated by small sawlog sized red maple and medium sawlog sized red oak, with some sugar maple, assorted birch, and hickory in the south.

The 3 acres of red pine appear to have been left unthinned from their original planting in the 1930's or 1940's (160 ft² / ac; 12" mean dbh). The oak hardwood stand (80 ft² / ac) is dominated by larger diameter red oak and small sawlog sugar maple. The northern hardwood section (95 ft² / ac) is dominated by medium diameter red oak followed by white ash, red and sugar maple, white and black oak and birch species.

Prior harvests include a roadside cut of Gate 13 Rd in 2009; a cordwood selective cutting of the northern half in 1980, and a selective cutting of the whole area in 1966.

Site Selection

The primary goal of harvesting on the watershed 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. This combination of structural and species diversity builds resistance and resilience into the forest.

This harvest aims to increase the species diversity of the area by removing the monoculture white and red pine stands. The harvest will improve the overall health of the forest by removing the red pine before it is killed by the red pine scale. Finally, this harvest will improve quality and overall vigor of the forest by removing poorly formed white pine. Advanced hardwood and white pine regeneration will help replace the red pine, and advanced white pine and oak seedlings will be released by the white pine removal.

Silvicultural Objectives

The silvicultural objectives at this site will focus on species diversity and disturbance resilience. The first goal will be to increase species diversity by treating the monoculture white and red pine with large green retention openings (approaching 2 acres for the white pine stands and 3 acres for the red pine) The second goal will be to improve disturbance resiliency of the forest by removing a species that is vulnerable to complete mortality by a known pest, by removing the red pine before it can be killed by the red pine scale (*Matsucoccus resinosae*). Removal of poorly formed white pine will also help improve disturbance resiliency in regards to large storm events. The poorly formed white pine will be replaced by shorter more vigorous mixed species regeneration. There was an abundant oak seed catch last year that will provide opportunity for oak regeneration in the pine stands. Additionally, the opening placed in the white pine stands have > 5 sq ft of basal area green tree retention to provide further seed for regeneration.

Cultural Resources

Existing cultural resources, including the foundations of homes and barns for Charles Jones, Etta Cook, and Frank Cadwell, as well as the remains of the Pitman Mill dam, have been flagged and will be avoided during harvest. Existing barways (breaks in walls) were utilized where feasible in order to minimize damage. Where existing barways were only present in areas of sensitive soils new breaks in the wall were created nearby in drier conditions.

Rare or Endangered Species

The lot contains no known rare or endangered species.

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	25.9	Red Maple	1.3
Red Pine	60.8	Sugar Maple	
Pitch Pine		Red Oak	4.2
Hemlock		Black Oak	
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash	1.1	Total Mbf	94.3
Beech		Cordwood (Cds)	46
White Birch		SW Pulp (Tons)	
B & Y Birch	1	HW Pulp (Tons)	
Black Cherry		Chips (Tons)	434

*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	WH	OH	RP	BB
Acres	25.2	3.2	2.9	1.1
Landowner Objective	LT	LT	LT	LT
Designation of Trees	CT	CT	CT	CT
Type of Cut	SE/SH	SE/SH	SE	SE/SH
Source of Regeneration	AD/SE	AD/SE	AD/SE	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.

Signature of landowner(s)

3-6-18

Date

Determination and Status 230-9323-18

	Approved	Disapproved	Expires
Cutting Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3/9/20
Signature of Service Forester/Director's Agent			
SITE VISIT WITH PLAN PREPARED AND THIS CABIN IS SITE VISIT 10/8/19	Date	3/12/18	3/12/18
Extension	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Expires / /
Amendment	App 1 <input type="checkbox"/>	Dis 1 <input type="checkbox"/>	App 2 <input type="checkbox"/>
	Dis 2 <input type="checkbox"/>		

Final Report and Comments

I hereby certify that the afore described Forest Cutting Plan and all relevant statutes have been substantially complied with.

10/8/19

Date

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

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

pg 4 of 5

Figure 1b: Forest Cutting Plan pg. 2.

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 Quabbin

Town Pelham | Lot 2051

File Number 230-9323-18

BMPs

Designation of Trees

Regeneration & Future Condition

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.

FLAGGING: Pink = warning/caution/ stay out | Blue = skid road | Orange & black = filter strip | Pink w/ Orange & black = no equipment FS

ORANGE PAINT: Horizontal line = edge of regeneration opening | Dot = tree to be protected/retained | Three vertical dots = end of sale

BLUE PAINT: Dot = cordwood or pulp | Three vertical dots = end of sale | Horizontal line = sawlog | Vertical slash = TSI | "X" = cull

Vertical line = skid road | "B" = Bump tree, tree to be left until skidding is complete

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

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
ST-1		
ST-2		
ST-3		
ST-4		

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

ST-1	
ST-2	
ST-3	
ST-4	

pg 5 of 5

Figure 1c: Forest Cutting Plan pg. 3.

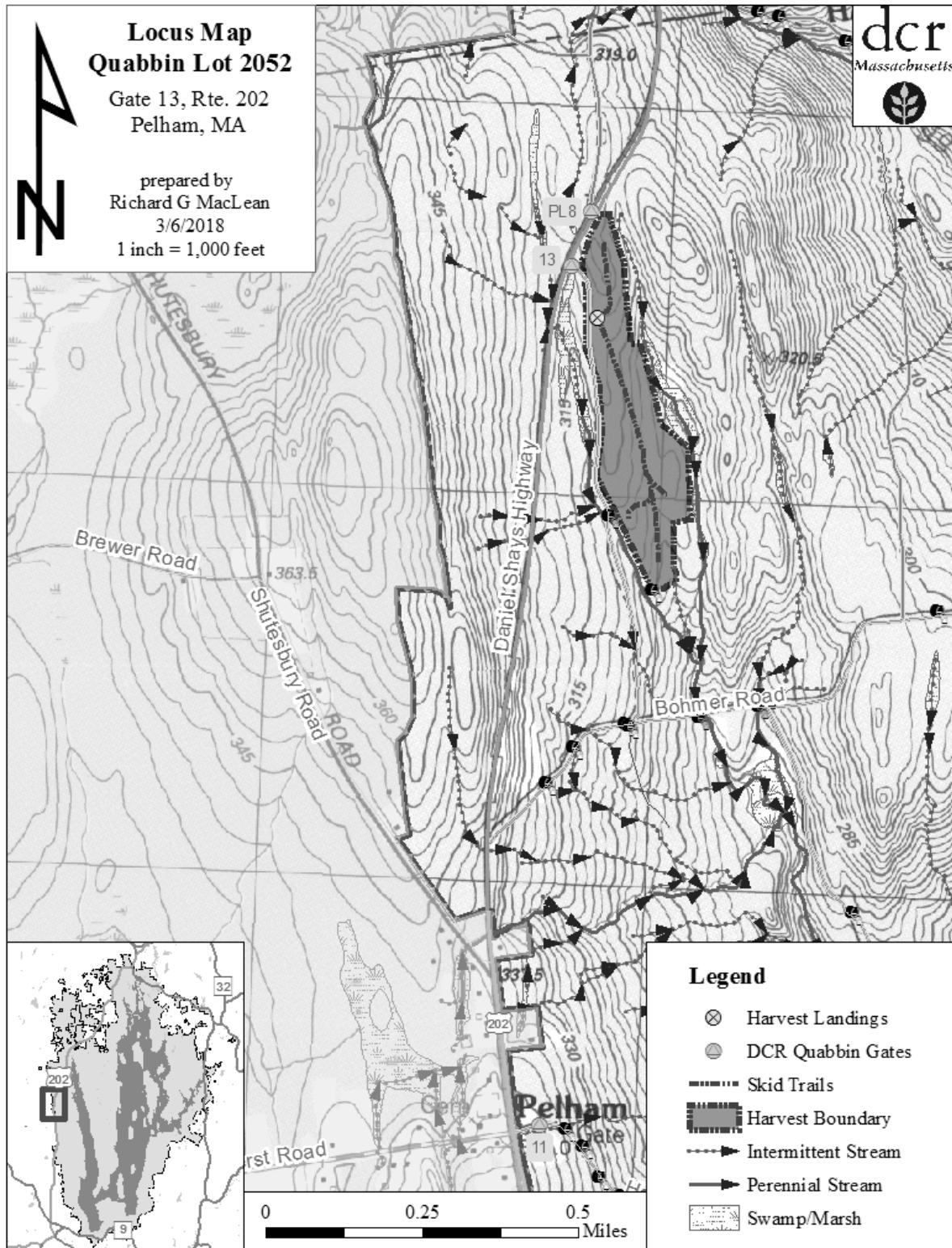


Figure 1d: Forest Cutting Plan Locus Map.

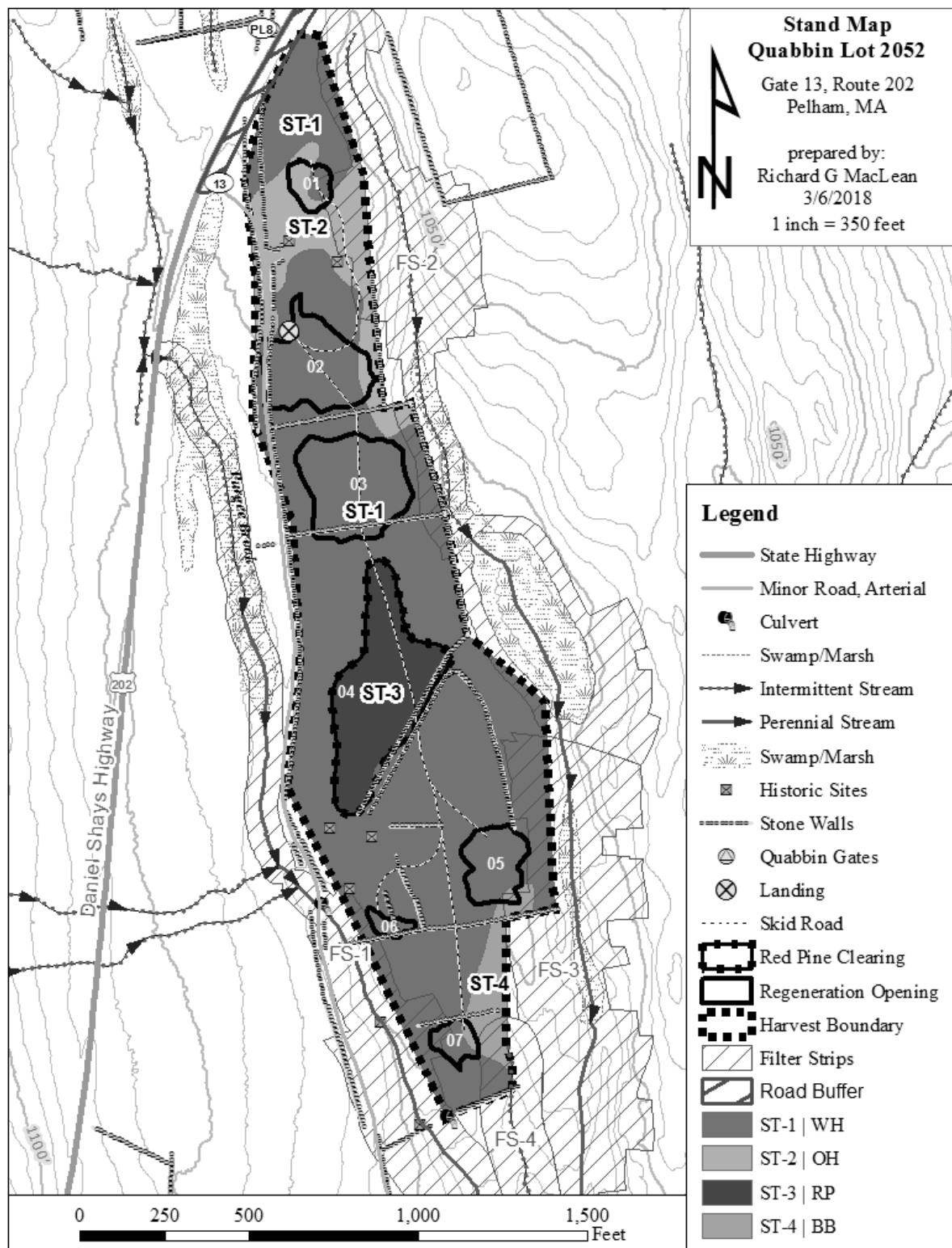


Figure 1e: Forest Cutting Plan Stand Map.

dcr

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

FILE # 230-9323-18

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 QUARRY 485 WAKE RD
(Name of Owner) BELCHERTOWN, MA 01007 01007
(Address)

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
LOT # 2052

Approval Date 3/12/18

Director's Agent DOUGLAS HUTCHESON

DCR Phone No. (413) 545-7020

ISSUED BY:

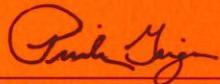

Priscilla E. Geigis, Director
Division of State Parks and Recreation

Figure 1f: Forest Cutting Plan Certificate.



Figure 2a: Prior to harvest, May 2018.



Figure 2b: After harvest, September 2019



Figure 2c: One year after harvest, August 2020



Figure 2d: Two years after harvest, September 2021



Figure 2e: Three years after harvest, August 2022.



Figure 2e: Five years after harvest, August 2024.