

**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 (~1 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.

Figures

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 230-9323-18 Case No. _____
Date Rec'd 3/9/18 Nat. Hert. 1 N
Earliest Start 3/26/18 Nat. Hert. Imp. N
River Basin CH1008EE Pub. Dr. Wat. QUABBIN
Gen. Obj. LT ACEC N

Site Information

Location

Town Pelham | Lot 2052
Road Rte. 202 | DCR Quabbin Gate 13
Acres 32.5 Proposed Start Date Spring 2018
Vol. MBF 94.3 Vol. Cds. 46 Vol. Tons 400

Plan Preparer

Name Richard MacLean & Herm Eck
Address DCR-DWSP Quabbin Section
485 Ware Road
Town, State, Zip Belchertown, MA 01007
Phone 413 323-6921 x 553
Type of Preparer Mass. Licensed Forester
*Mass. Forester License # 63
*Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name DCR-DWSP Quabbin Section
Mailing Address 485 Ware Road
Richard.MacLean@state.ma.us | HEck@state.ma.us
Town, State, Zip Belchertown, MA 01007
Phone (413) 323-6921 x553 | (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.

Best Management Practices

Stream Crossings None

Indicate location on map				
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	VA	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

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

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 3 of 5

Figure 1a: Forest Cutting Plan pg. 1.

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.

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) _____ Date 3-6-18

Determination and Status 230-9323-18

Approved ☒ Disapproved ☐ Expires 3/9/20
3/12/18

Signature of Service Forester/Director's Agent _____ Date _____
SITE VISIT WITH PLAN PREPARER AND CHAS. CABONE

Extension 1 ☐ 2 ☐ Expires _____ Ser. For. Ints. 3/6/18

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.
Roughmutter 10/8/19
Signature of Service Forester/Director's Agent _____ Date _____
SITE VISIT 10/8/19

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

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

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

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
-----------	--	--

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	

Figure 1c: Forest Cutting Plan pg. 3.

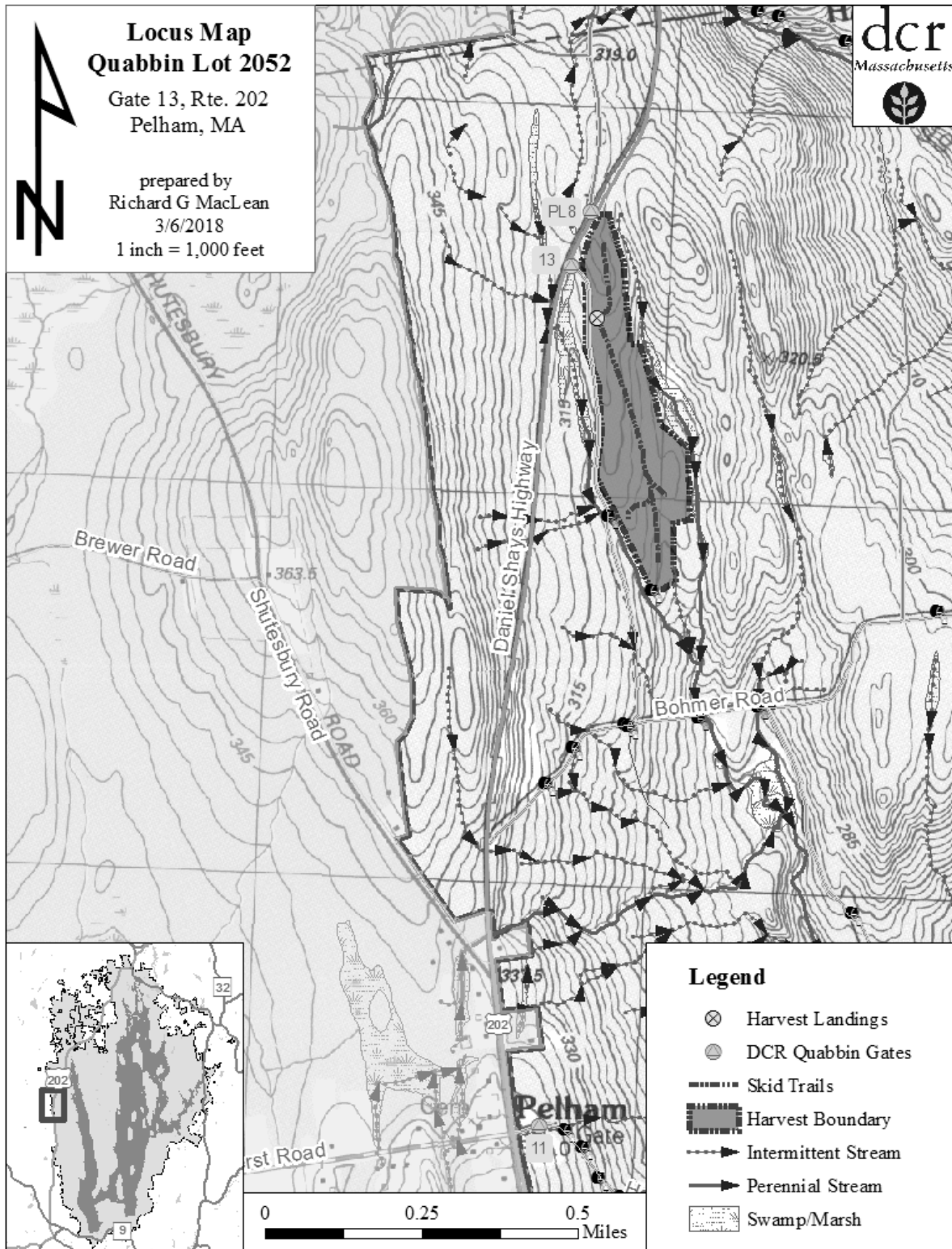


Figure 1d: Forest Cutting Plan Locus Map.

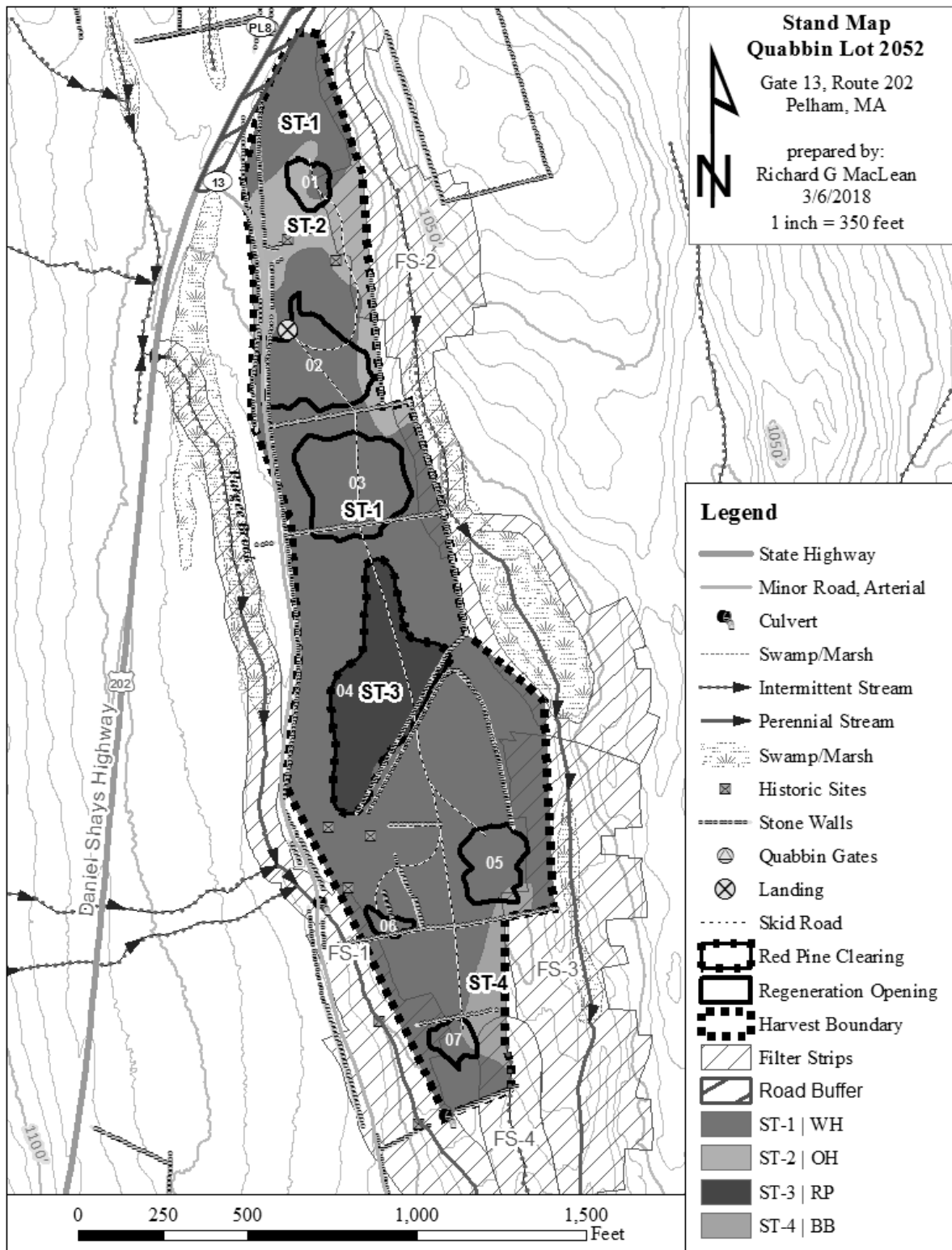


Figure 1e: Forest Cutting Plan Stand Map.



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 QUABBIN 485 WARE RD 01007
(Name of Owner) (Address) DELCHEATOWN, MA 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

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.