

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

Project Title: Gate 30 Red Pine

DWSP Harvest Permit Number: 3153

DWSP Proposal ID: NS-18-RP_Rt122

DCR Forest Cutting Plan File Number: 204-9099-18

Location Information

Watershed: Quabbin

Town(s): New Salem

Acres: 7.2

Nearest Road: Route 122

Natural Heritage Atlas overlap?: Yes

Public Drinking Water Supply Watershed?: Yes

Area of Critical Environmental Concern (ACEC)?: No

Site Information

Forest Types: red pine, white pine

Soils: Hinckley loamy sand, 8 to 25% slope and Sudbury sandy loam, 0 to 3% slope

Wetland Resources: There are no wetland resources within the harvest area. Nearby water resources include the middle branch of the Swift River and associated wetlands, and a stream flowing into the Swift River through a culvert under Route 122.

Vernal Pools: none

Harvest Information

Harvest Start Date: March 28, 2018

Harvest End Date: April 13, 2018

Number of Wetland Crossings: two (both on sensitive soils, but not legal wetlands)

Number of Stream Crossings: none

Best Management Practices Applied

Stream Crossings: n/a

Filter Strips: Variable width filter strips on streams/rivers, and standard filter strips on wetlands.

Wetland Crossings: mitigation: corduroy; stabilization: dry or frozen

Harvesting in Wetlands: Two sections of an existing skid road are labeled as wetland crossings on the cutting plan even though they do not meet the legal definition of wetlands, in order to ensure protection of their relatively vulnerable soils.

DWSP Forester supervising this harvest

Name: Helen Johnson

Forester License number: 383

Phone number: (617) 733-2937

Email: Helen.Johnson@mass.gov

Narrative

General Description/Forest Composition/History

This 7.2 acre harvest in the town of New Salem is bordered by Routes 202 and 122 to the north and east, and the Middle Branch of the Swift River and associated wetlands to the west and south. Quabbin Gate 30, near the middle of the harvest area, is popular among walkers and cyclists.

The primary objective of this harvest is to remove red pine plantations before the trees are killed by red pine scale, an invasive insect that is moving swiftly through the region and causes rapid mortality, as has already occurred in other locations at Quabbin. If left to die, these trees would become safety hazards for walkers and bicyclists at Quabbin and drivers on Routes 122 and 202. Harvesting them before they die will protect public safety while avoiding the expense of removing dead trees, and facilitate the transition from monoculture to diverse native forest. Since the cut trees will be used primarily for durable wood products, an additional benefit is that most of their carbon will be sequestered for decades to come. If left to die, these trees would release carbon into the atmosphere as they decayed.

Red pine removal accounts for 80% of the harvest area. The remaining 20% is in white pine-dominated areas, where the harvest objective is to increase age and species diversity. This is being accomplished patch cuts up to a half-acre in size, which will result in increased sunlight to the forest floor, enabling new seedlings to become established and existing young trees to continue to grow. The white pines that were selected for cutting are those that have thin crowns and/or weak form due to damage from white pine weevil or needle drop fungi.

In addition to red and white pine, stands in this area contain minor components of hemlock and various hardwoods, including red, black and white oak, red maple, sugar maple, black birch, paper birch, and black cherry. Where there are healthy, well-formed hemlocks and hardwoods within cut areas, they are being retained and protected in order to maximize the diversity of the next generation of trees.

Since most of the trees within the 50 foot aesthetic road buffer are red pines which, if left to die, would become safety hazards for vehicles, more than 50% of basal area will be cut along the highways. However, within the variable width filter strip for the Swift River, some red pines will be left in order to fulfill regulatory requirements, even though they are expected to die. Once dead, they will provide wildlife habitat along the river.

There are two types of glacial outwash soils in this area: Hinkley loamy sand, which is composed of excessively drained, sandy and gravelly glaciofluvial deposits derived from gneiss, granite and/or schist; and Sudbury sandy loam, which comes from the same parent material but is less gravelly, and only moderately well drained. Although there are no wetland soils within the cut area, two wetland crossings were included in the cutting plan in order to ensure that care is taken where the existing skid road is adjacent to a vegetated wetland.

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 will remove red pine plantations that were planted in the first half of the 20th century, and are now threatened by red pine scale. A white pine-dominated half acre will also be harvested. The native stands of diverse species that replace these monocultures will be better able to resist and recover from natural disturbances, including invasive insects and diseases.

Silvicultural Objectives

This harvest focuses on removal of all red pine, except where it must be retained in order to meet regulatory requirements for filter strips. A small opening will also be made in white pine that has been damaged by white pine weevil and needle drop fungi. Advance regeneration and mature trees of native species are being retained and protected wherever possible.

Cultural Resources

A sawmill was once located along the Swift River, just east of Gate 30. A substantial stone wall and remnants of a stone dam are all that remains. These features have been avoided in order to prevent damage by harvesting equipment.

Rare or Endangered Species

The Natural Heritage and Endangered Species Program (NHESP) of the Division of Fisheries and Wildlife has determined that state-listed sensitive species may exist in the Middle Branch of the Swift River and its associated wetlands. To protect them from unnecessary disturbance, detailed information regarding the affected species and their locations is not included here. NHESP has reviewed the Forest Cutting Plan for this lot and determined that operations should be limited to October 15 to April 15 in the portion of the Lot that is within 50 to 300 feet of the Middle Branch of the Swift River. (No portion of the harvest is less than 50 feet from the River.)

Forest Cutting Plan

Forest Cutting Plan page 1 of 6

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 204-9099-18 Case No. _____
 Date Rec'd 11/2/17 Nat. Hert. 11-6-17
 Earliest Start 11/20/17 Nat. Hert. Imp. Yes
 River Basin Chicopee Pub. Dr. Wat. _____
 Gen. Obj. LT ACEC _____

11-02-17P02:53 RCVD

FINAL (5/25)

Site Information

Location

Town New Salem **LOT 3153 (Gate 30)**
 Road Route 122
 Acres 7.2 Proposed Start Date Nov. 2017
 Vol. MBF 64.4 Vol. Cds. 1 Vol. Tons 25

Plan Preparer

Name Helen Johnson
 Address DCR-DWSP Quabbin Section
485 Ware Road
 Town, State, Zip Belchertown, MA 01007
 Phone 978-544-6343

Type of Preparer Mass. Licensed Forester

*Mass. Forester License # 383

*Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name DCR-DWSP Quabbin Forestry Program
 Mailing Address 485 Ware Road
 Town, State, Zip Helen.Johnson@state.ma.us
 Email Address Belchertown, MA 01007
 Phone 978-544-6343
 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 No stream crossings

Indicate location on map	SC-1	SC-2	SC-3	SC-4
Type of Crossing				
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	20'	45'		
Mitigation	DR/FR	DR/FR		
Stabilization	CO	CO		

Filter Strips

Indicate location on map	Stream	Wetland	River	Wetlands
	FS-1	FS-2	FS-3	FS-4
Width (50', 100', or VA)	VA	50	VA	50

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

See NHESP requirements attached.

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

Products to be Harvested*			
Species	Mbf/Cds		Mbf/Cds
White Pine		Red Maple	
Red Pine	48.5	Sugar Maple	
Pitch Pine	15.9	Red Oak	
Hemlock		Black Oak	
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	64.4
Beech		Cordwood (Cds)	1
White Birch		SW Pulp (Tons)	25
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/WP	RP/WP	WP	
Acres	1.9	3.9	1.4	
Landowner Objective	LT	LT	LT	
Designation of Trees	CT	CT	CT	
Type of Cut	SE	SE	SE	
Source of Regeneration	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] _____ 11-1-17
 Signature of landowner(s) Date

Determination and Status 204.9099.18

Approved Disapproved Expires 11/2/19

Cutting Plan Sean Sibbey 11/20/17
 Signature of Service Forester/Director's Agent Date

Final Report and Comments

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

[Signature] 5.7.25
 Signature of Service Forester/Director's Agent Date

Extension 1 2 Expires _____ Ser. For. Ints. _____

Amendment App 1 Dis 1 App 2 Dis 2 _____

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/Hem	HH Hem/Hdwd	RM Red Maple	LT Leave Tree	ST Seed Tree	NT Non Com Thin	SE Natural Seed
WH WP/Hdwd	BC Blek 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	Non-Standard Systems:*	CO Coppice
RP Red Pine	OH Oak/Hdwd	SM Sugar Maple	Landowner Objective	SA Salvage	HG Highgrade*	DS Direct Seed
SR Red Spruce	OR N Red Oak	PP Pitch Pine	LT Long-term Mgt.	SN Sanitation	DL Diameter Limit*	OT Other
			ST Short-term Har.		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

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 New Salem

File Number 204.9099-18

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.

Blue Paint: dot = cordwood or pulp; horizontal line = sawlog; vertical/diagonal line = TSI; "X" = cull; three dots = harvest boundary.

Trees to be protected: solid orange flagging (edge of group) or Pink "Do Not Cut." Combined pink, blue and orange flagging = landing.

Pink "Wetland Delineation" flagging = stream channel or edge of wetland (no equipment and no cutting except at approved crossings).

Blue flagging or Yellow "Skid Trail" flagging = skidder/forwarder trails. Solid pink flagging = cultural features to be protected.

The WCs are on an existing road adjacent to a wetland and do not meet the regulatory definition of wetland, but need corduroy.

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

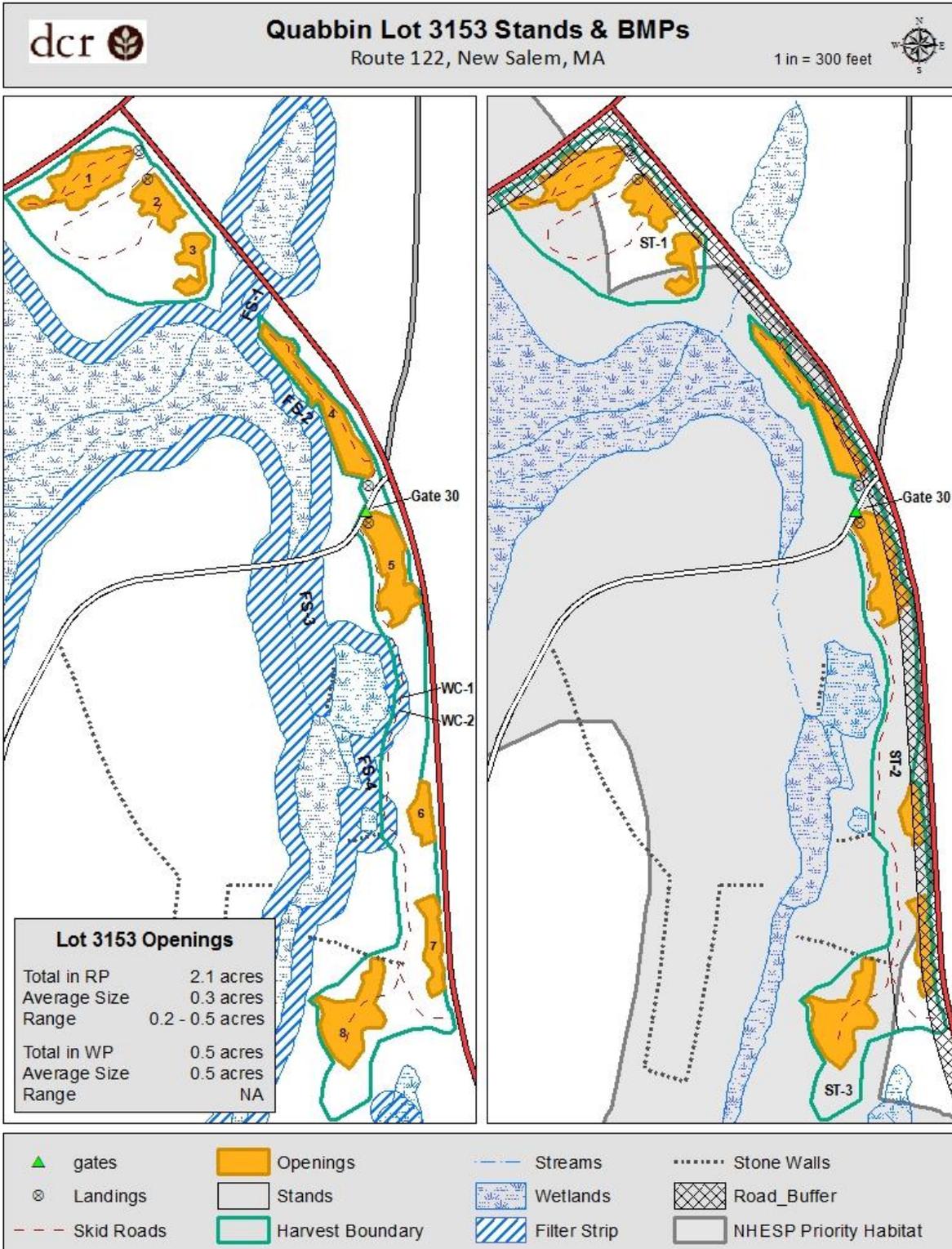
Regeneration & Future Condition

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





dcr



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

FILE #

204.9099.18

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 Quabbin 485 Ware Rd, Belcher town, MA 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
Gate 30/3153rd lot.

Approval Date 11/20/17

Director's Agent Sean Lubyey

DCR Phone No (413) 545-4539

ISSUED BY:

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