

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

Project Title: Fairview Hill and Spec Pond Red Pine

DWSP Harvest Permit Number: 3157

DWSP Proposal ID: NS-18-20, 21

DCR Forest Cutting Plan File Number: 204-9410-18

Location Information

Watershed: Quabbin (note: 22.3 out of 32.7 acres are on the Quabbin Reservation but not on the Quabbin watershed)

Town(s): New Salem

Acres: 32.7

Nearest Road: Route 122

Natural Heritage Atlas overlap?: Yes

Public Drinking Water Supply Watershed?: Yes, 10.4 out of 32.7 acres

Area of Critical Environmental Concern (ACEC)?: No

Site Information

Forest Types: red pine, white pine, and white pine-hardwoods

Soils: Canton fine sandy loam, 3 to 8% slopes, very stony; Deerfield loamy sand, 3 to 8% slopes; Newfields fine sandy loam, 3 to 8% slopes; Walpole fine sandy loam, 0 to 3% slopes, Windsor and Merrimac soils, 25 to 60% slopes; Windsor loamy sand, 0 to 8% slopes.

Wetland Resources: There are five wetland resources within the west harvest area. The westernmost wetland flows along the south side of Route 122 in the northwest corner of the harvest area, draining into O'Laughlin Pond at the northern tip of the Quabbin Reservoir. Three others drain north across Route 122 into a stream-wetland complex that flows northwest and eventually turns southward, crossing under the highway again before entering O'Laughlin Pond. One of those was created by new beaver activity that started immediately before the harvest, forcing a shift in the harvest area, re-routing of skid roads, and the addition of a wetland crossing. The fifth wetland resource is an intermittent stream that flows east into South Spectacle Pond. The eastern harvest area does not contain any wetland resources, but is surrounded by North and South Spectacle Ponds.

Vernal Pools: The largest of the above listed wetlands is a DWSP-verified vernal pool.

Harvest Information

Harvest Start Date: April 8, 2018

Harvest End Date: March 22, 2019

Number of Wetland Crossings: 2

Number of Stream Crossings: 1

Best Management Practices Applied

Stream Crossings: bridge, corduroy

Filter Strips: 50 foot filter strip on an intermittent stream outside the Quabbin watershed

Wetland Crossings: WC-1: existing culvert crossing in a road. WC-2: bridge, corduroy.

Harvesting in Wetlands: n/a

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 32.7 acre harvest in the town of New Salem is on the south side of Route 122 from Gate 31 to Gate 33, and on the north and south side of Route 122 between North and South Spectacle Pond.

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. Red pine removal accounts for 98% of the volume of wood harvested. If left to die, these trees would become safety hazards for vehicles on Route 122. By harvesting them before that happens we are protecting public safety, preventing the expense of removing dead trees, and facilitating 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.

Most of the trees within the 50 foot aesthetic buffer on the south side of Route 122 are red pines which, if left to die, would become safety hazards for vehicles. Therefore, more than 50% of basal area will be cut along the highways.

The dominant soil type in this area is Windsor loamy sand, which is excessively drained glacial outwash. Also present are poorly drained Walpole sandy loam and Scarborough mucky sandy loam. Corduroy (mats constructed from slash) will be employed to protect these more vulnerable soils, where they cannot be avoided altogether. There will be no harvesting and no equipment in wetlands, which have been delineated based on vegetation and microtopography.

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 pines that were planted in the first half of the 20th century, and are now threatened by red pine scale. Small areas dominated by white pine 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. Small openings will also be made in white pine dominated areas that have 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

The Quabbin Takings Sheet shows that prior to the construction of the Quabbin Reservoir, there were three residences located around the northern harvest area. These were removed when the Reservoir was created. No other cultural resources have been found in this area.

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 or habitats may exist within the harvest area. To protect them from unnecessary disturbance, detailed information regarding affected species and their locations is not included here. This harvest has been designed in consultation with NHESP in order to enhance habitat for state listed species, as well as to ensure their protection. In order to prevent a Take, NHESP issued restrictions on this project that are incorporated into the Forest Cutting Plan and have been implemented on this harvest from its earliest planning stages.

Forest Cutting Plan

Forest Cutting Plan page 1 of 7

02-20-19411:03 RCVD

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)

orig

For DCR Use Only:

File Number	204.9410-18	Case No.	-
Date Rec'd	5/26/18	Nat. Hert.	Y 1
Earliest Start	6/13/18	Nat. Hert. Imp.	N
River Basin	Milled	Pub. Dr. Wat.	N
Gen. Obj.	LT	ACEC	N

***Amendment 1:** Added harvest area, two skid roads, and WC-2. (2/19)

Site Information

Location FINAL (5/25)

Town New Salem **Quabbin Lot 3157**

Road Route 122

Acres 32.7 Proposed Start Date June 2018

Vol. MBF 100 Vol. Cds. 2 Vol. Tons 29

Landowner

Name DCR-DWSP Quabbin Forestry Program

Mailing Address 485 Ware Road
Helen.Johnson@mass.gov

Town, State, Zip Belchertown, MA 01007

Phone 617-733-2937 / 413-213-7953

Ch61 61A 61B Stew *Case # _____

CR CR Holder _____

Plan Preparer

Name Helen Johnson

Address DCR-DWSP Quabbin Forestry Program
485 Ware Road

Town, State, Zip Belchertown, MA 01007

Phone 617-733-2937 / 413-213-7953

Type of Preparer Mass. Licensed Forester

*Mass. Forester License # 383

*Required for land under Ch61, Ch61A or Forest Stewardship

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

Indicate location on map	SC-1	SC-2	SC-3	SC-4
Type of Crossing	BR/CO			
Existing Structure	no			
Type of Bottom	MU			
Bank Height (ft)	1'			
Stabilization	CO			

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%?)				

Wetland Crossings

Indicate location on map	WC-1	WC-2	WC-3	WC-4
Length of Crossing	12'	100'		
Mitigation	OT*	FR/OT		
Stabilization	CO/HB	CO/BR		

* Culvert crossing in existing road

Service Forester Comments

Filter Strips

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

Codes

Type of Preparer	Type of Crossing	Stabilization	Mitigation	Type of Bottom	Note:
LF Mass. Lic. For	CU Culvert	SE Seed	FR Frozen	LE Ledge	Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin.
TH Lic. Tim. Har	BR Bridge	MU Mulch	DR Dry	ST Stony	Some forestry activities, such as prescribed burning and pesticide or fertilizer application may require additional permits.
TB Timber Buyer	FO Ford	CO Corduroy	OT Other	MU Mud	Consult MA Forestry BMP Manual for further information.
LO Landowner	PO Piled	ST Stone		GR Gravel	
OT Other	OT Other	HB Hay Bales		OT Other	
		OT Other			

Forest Products

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	1.8	Red Maple	
Red Pine	98.2	Sugar Maple	
Pitch Pine		Red Oak	
Hemlock		Black Oak	
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	100
Beech		Cordwood (Cds)	2
White Birch		SW Pulp (Tons)	29
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.

Stand Treatment

Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	RP/WP	RP	RP	WH
Acres	19.6	1.5	2.2	6.5
Landowner Objective	LT	LT	LT	LT
Designation of Trees	CT	CT	CT	CT
Type of Cut	SA/ST	SA	SA	SE
Source of Regeneration	AD/SE	AD/SE	AD/SE	AD/SE

Landowner


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)

2-19-19
 5-25-18
 Date


Service Forester

Determination and Status 204-9410-18

Approved Disapproved Expires 5/26/20
 Cutting Plan

 Signature of Service Forester/Director's Agent Date 6-12-18
 Extension 1 2 Expires Ser. For. Ints. 1
 Amendment App 1 Dis 1 App 2 Dis 2
 (2/19) JH7

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 5-7-20

Codes

Forest Types	Designation of Trees	Type of Cut	Source of Regeneration
WP White Pine	CT Cut Tree	SH Shelterwood	AD Advanced
WK WP/Hem	LT Leave Tree	ST Seed Tree	SE Natural Seed
WH WP/Hdwd	SB Stand Boundary	CC Clear Cut	PL Plant
WO WP/Oak	OT Other	SE Selection	CO Coppice
RP Red Pine	Landowner Objective	SA Salvage	DS Direct Seed
SR Red Spruce	LT Long-term Mgt.	SN Sanitation	OT Other
	ST Short-term Har.		
		Intermediate Harvests:	
		CT Commercial Thin	
		NT Non Com Thin	
		Non-Standard Systems*:	
		HG Highgrade*	
		DL Diameter Limit*	
		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 Quabbin

Town New Salem

File Number 204-9410-18

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.

Most of ST-1 has been treated with regeneration cuts in the past, resulting in vigorous new growth. Harvesting in these areas will be the final overstory removal, primarily of red pine. Most overstory trees of other species will be retained to provide age diversity. Some previous skid roads will not be used, in order to protect concentrations of oak saplings. Forwarder roads are marked with orange paint and/or blue flagging. Triple dots of blue paint = edge of cut. "Streamside Management Zone" flagging = 200' vernal pool buffer, where ruts will be graded to <6".

Due to dominance of red pine, more than 50% of BA will be cut in road buffers for public safety.

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



Cutting Plan 204-9410-18, Amendment 1
 Quabbin Lot 3157
 February 15, 2019

Description of Changes

High ground water levels over the past fall and winter have combined with a new beaver dam near the junction of Route 122 and the AT&T right of way to render some portions of this lot too wet to be worked. Consequently, 48 trees that were previously marked to be cut have been unmarked, mostly in the area between Route 122, the wetland that intersects it, and the access road with the existing crossing labeled WC-1. Most of the unmarked trees are red pine, and they were unmarked with black paint.

CUTTING STANDARDS	
Location on Map	ST-5
Forest Type	WP
Acres	2.9
Landowner Objective	LT
Designation of Trees	CT
Type of Cut	SE
Source of Regeneration	AD/SE

Since the lot has already been sold, it was necessary to mark a comparable volume of wood in another location.

Consequently, a new stand with a half-acre opening has been added between the Gate 32 and Gate 33 access roads, as shown in the table to the left and on the revised map. The trees to be cut are mature white pine adjacent to two older openings that are now well stocked with white pine saplings and poles. Cutting the mature pines will release the younger forest to the south and east, and will enable new regeneration

to get started. Orange paint was used to distinguish the newly marked trees from trees marked with blue for the original cutting plan. Since this was a 1:1 swap, changes in volume were negligible.

In order to address excess moisture in existing forwarder roads, additional changes have been made as follows:

- An existing forwarder road from a prior harvest has been added, connecting the new opening to the red pine along Route 122 directly to the north. This will provide a dryer means of access to this section of red pine.
- The primary forwarder road between Gates 31 and 32 has been relocated uphill to avoid some of the wetter portions of the existing road.
- Where the road between Gates 31 and 32 could not be relocated, a new wetland crossing (WC-2) has been added in order to provide additional protection both to the road surface and to the adjacent wetland.

COMMONWEALTH OF MASSACHUSETTS · EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS

Department of Conservation and Recreation
 485 Ware Road
 Belchertown, MA 01007
 413-323-6921 413-784-1751 Fax
www.mass.gov/orgs/department-of-conservation-recreation



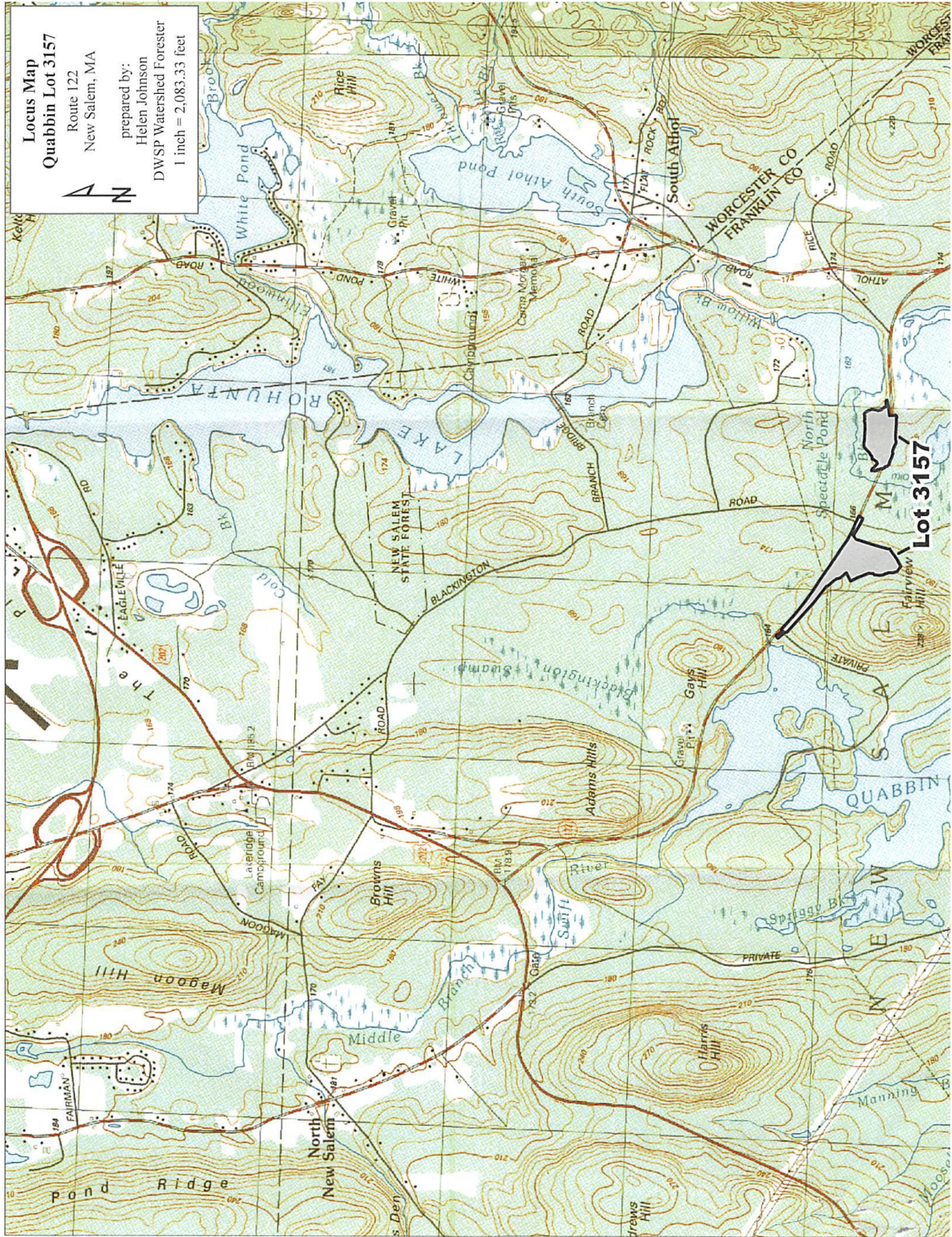
Charles D. Baker
 Governor

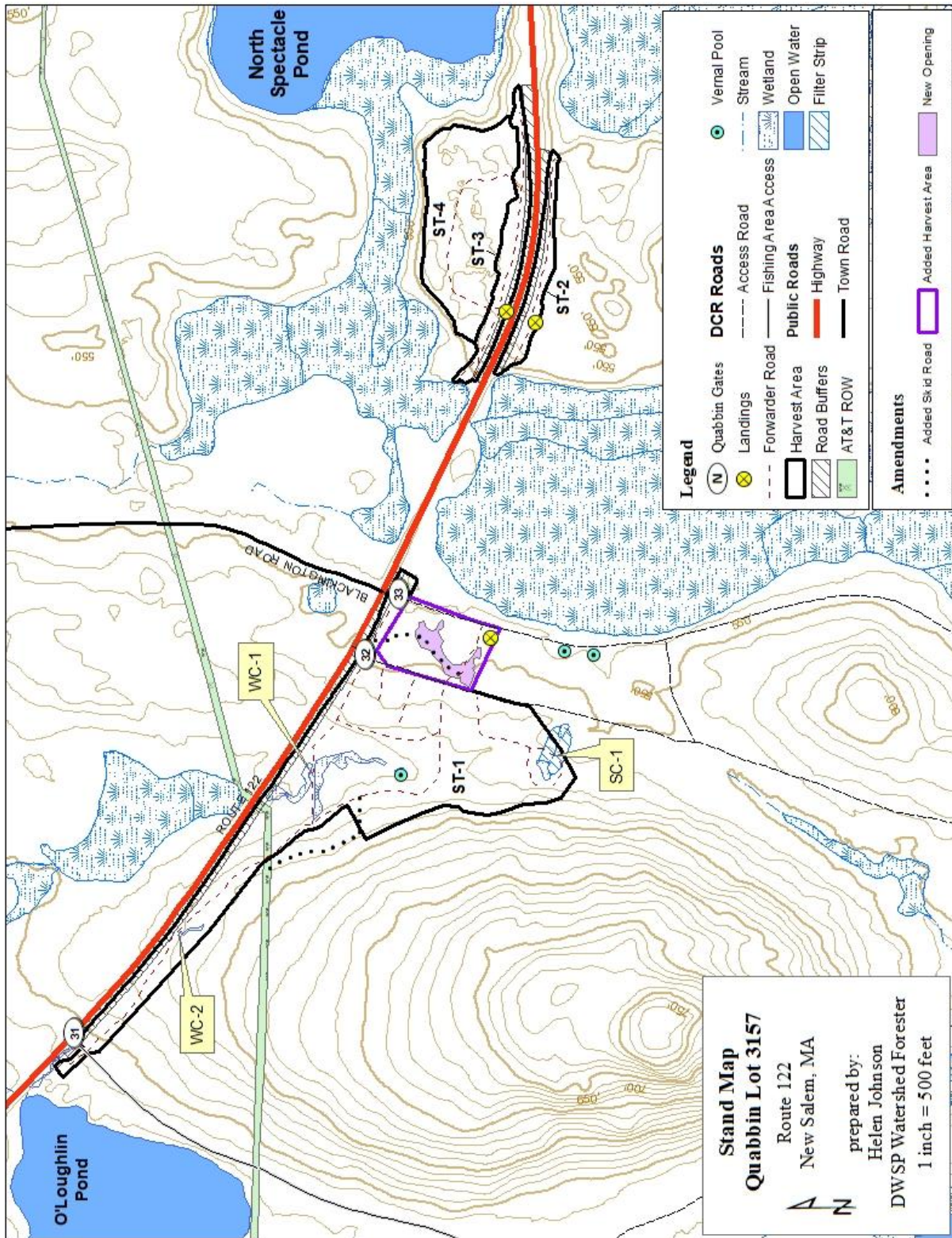
Karyn E. Polito
 Lt. Governor

Matthew A. Beaton, Secretary, Executive
 Office of Energy & Environmental Affairs

Leo Roy, Commissioner
 Department of Conservation & Recreation

Forest Cutting Plan page 5 of 7





dcf



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

FILE # 204-9410-18

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-DNSP Quabbin 485 Ware Rd, Belcher town, MA in accordance with the
(Name of Owner) (Address) 01007

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
Rte 122 lot. #3157, New Salem

Approval Date 6/12/18
Director's Agent Andrew Rawcliffe / Sean Libbey
DCR Phone No. (617) 548-1677 / (413) 545-4539

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