

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

Project Title:

DWSP Harvest Permit Number: 3139
DCR Forest Cutting Plan File Number: 204-7780-16

Site Information

Watershed: Quabbin	Town(s): New Salem
Acres: 22.6	Nearest Road: South Main Street
Natural Heritage Atlas overlap?: Yes	Public Drinking Water Supply Watershed?: Yes
Forest Types: hemlock-hardwood and mixed oak	ACEC?: No
Soils: Canton-Chatfield-Hollis complex and Chatfield-Hollis complex, rocky	
Wetland Resources: None within harvest area. Two small wetlands connected by an intermittent stream are about 100 feet to the east.	
Vernal Pools: The wetlands are both vernal pools.	

Harvest Information

Harvest Start Date: December 2015	Harvest End Date: August 28, 2017
Number of Wetland Crossings: None	Number of Stream Crossings: None

Best Management Practices Applied

Stream Crossings	There are no stream crossings.
Filter Strips	Along water resources to the east, variable width filter strips for streams, 100 foot filter strips for vernal pools/wetlands.
Wetland Crossings	There are no wetland crossings.
Harvesting in Wetlands	There is no harvesting in wetlands.

DWSP Forester supervising this harvest
Name: Helen Johnson
Forester License #: 383
Phone #: 978-544-6343
Email: Helen.Johnson@state.ma.us

NARRATIVE

General Description/Forest Composition/History:

The area to be harvested is in the town of New Salem at the south end of South Main Street, just inside DCR Gate 25. To the east are two wetlands connected by an intermittent stream that continues south into an extended stream-wetland complex. To the west are steep slopes leading down to the Gate 24 access road, and beyond that, Hop Brook. To the south is a stone wall, which indicates that this area was probably cleared for agriculture in the 18th and 19th centuries.

The area to be cut is dominated by hemlock that is rapidly failing due to a combination of hemlock pests (hemlock woolly adelgid, hemlock elongate scale, hemlock looper). Black birch and oaks are the primary associated hardwoods in the overstory, along with a minor component of white pine. Hemlock decreases and mixed oaks become dominant towards the south end of the lot.

The forest floor is almost completely bare in the areas with dense hemlock, save occasional small patches of mountain laurel and hemlock seedlings growing in old skid roads. Areas with less hemlock in the overstory tend to have more regeneration in the sapling-pole size classes, but still very few tree seedlings.

The soils on this lot are primarily Canton-Chatfield-Hollis complex and Chatfield-Hollis complex. These are well drained glacial till soils derived from schist and gneiss. There is some exposed bedrock at the south end of the lot.

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.

On this particular lot, if the hemlock were left to die on their own, research and experience have shown that they would likely be replaced by a near monoculture of black birch. Hence, one of the primary goals of this harvest is to improve the species diversity of the next generation of trees. A secondary goal is to reduce the number of hazard trees along the road, which gets frequent recreational use.

Silvicultural Objectives:

This harvest focuses on removal of the overstory in small groups, up to ½ acre in size, in order to foster regeneration. Groups were placed where there were clusters of trees that were declining or had weak stem form, with a preference for cutting declining hemlocks. These vulnerable trees will be replaced with vigorous new seedlings. Wherever possible wildlife habitat features were maintained and

protected, such as snags (dead trees) and trees with cavities or raptors' nests. The full diversity of existing native tree species is being maintained and promoted. Relatively healthy hemlocks have also been retained in the hope that this species might recover, although this appears unlikely on this site due to the rapid rate of decline.

Cultural Resources:

A stone walls borders the south end of the lot, and there are deteriorating walls along the access road. These walls will be avoided and protected during the harvest. 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:

The southern third of this lot is within a habitat "bubble" designated for protection by the Natural Heritage and Endangered Species Program (NHESP). The protected area centers on Hop Brook, which is 500-1000 feet away, at the base of a long, steep slope to the west. NHESP has determined the harvest will have no impact on protected species, and does not need to be restricted in any way.

The lot contains no other known rare or endangered species. Critical habitats are limited to the aforementioned vernal pools, which are 100 feet or more outside the lot to the east. Common wildlife on this site includes deer, turkey, coyote and moose.

FIGURES

Figure 1. Forest Cutting Plan

Figure 2. Photo Series 1: Opening on the east side of the access road.

- A. Before Harvest, December 2015**
- B. Immediately After Harvest, June 2016**
- C. After One Growing Season, August 2017**

Figure 3. Photo Series 2: Opening on the west side of the access road.

- A. Before Harvest, December 2015**
- B. Immediately After Harvest, June 2016**
- C. After One Growing Season, August 2017**

Figure 4. Photo Series 3: Opening south of the fire line, near the north edge of the lot.

- A. Before Harvest, December 2015**
- B. Immediately After Harvest, June 2016**
- C. After One Growing Season, August 2017**

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)

FINAL

Amendment: Add West Landing

For DCR Use Only:

File Number	204-7780-16	Case No.	
Date Rec'd	8/28/2015	Nat. Hert.	YES / NO
Earliest Start	9/14/2015	Nat. Hert. Imp.	
River Basin	Chicopee	Pub. Dr. Wat.	Quabbin
Gen. Obj.	LT	ACEC	NO

Site Information

Location

Town New Salem **LOT 3139**

Road South Main Street

Acres 22.6 Proposed Start Date Sept. 2015

Vol. MBF 53.8 Vol. Cds. 53 Vol. Tons 54

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

Best Management Practices

Stream Crossings No 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 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	50*	50*	

* Actual width of vernal pool filter strips = 100 feet

Codes

Landowner

Name DCR-DWSP Quabbin Section

Mailing Address 485 Ware Road
Helen.Johnson@state.ma.us

Town, State, Zip Belchertown, MA 01007

Phone 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.

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	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 Poled	ST Stone		GR Gravel	
OT Other	OT Other	HB Hay Bales		OT Other	
		OT Other			

If Other (OT) is used in any category an explanation must be given on an attached narrative page

pg 3 of 5

LOT 3139

Forest Products

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine		Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	7.8
Hemlock	38.7	Black Oak	1.5
Spruce		White Oak	0.8
Other Sftwd.		Other Hdwd.	0.6
White Ash		Total Mbf	53.8
Beech		Cordwood (Cds)	53
White Birch		SW Pulp (Tons)	54
B & Y Birch	4.4	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	HH	OM		
Acres	16.0	6.6		
Landowner Objective	LT	LT		
Designation of Trees	CT	CT		
Type of Cut	SE*	SE*		
Source of Regeneration	AD/SE	AD/SE		

* Small group and single tree selection, with groups up to 1/2 acre.

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 specie

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]

Signature of landowner(s)

8-25-15
Date

Service Forester

Determination and Status

Approved ☒ Disapproved ☐ Expires 8/28/2017

Cutting Plan *[Signature]* 9/18/2015
Signature of Service Forester/Director's Agent Date

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

Amendment App 1 ☒ Dis 1 ☐ App 2 ☐ Dis 2 ☐ FE
11/30/15 FE

Final Report and Comments

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

[Signature] 5/11/16
Signature of Service Forester/Director's Agent Date

Codes

Forest Types				Designation of Trees	Type of Cut	Intermediate Harvester:	Source of Regeneration
WP White Pine	HK Hemlock	OM Mixed Oak	CT Cut Tree	SH Shelterwood		AD Advanced	
WK WP/Hem	HH Hem/Hdwd	RM Red Maple	LT Leave Tree	ST Seed Tree	CT Commercial Thin	SE Natural Seed	
WH WP/Hdwd	BC Black Cherry	BE Beech	SB Stand Boundary	CC Clear Cut	NT Non Com Thin	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 _____

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 "Do Not Cut" = trees to be protected

Blue = 200 foot vernal pool buffer - ruts to be graded to <6" daily during growing season (no skid roads within 100 feet of VPs)

Orange = edge of group

BLUE PAINT: Dot = cordwood / pulp; horizontal line = sawlog; diagonal line = low value sawlog; vertical line = TSI; "X" = cull

Edge of harvest marked with three blue dots of paint and/or pink "Timber Harvest Boundary" flagging.

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

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

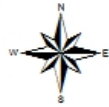
Stand No.

Desired Future Condition

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

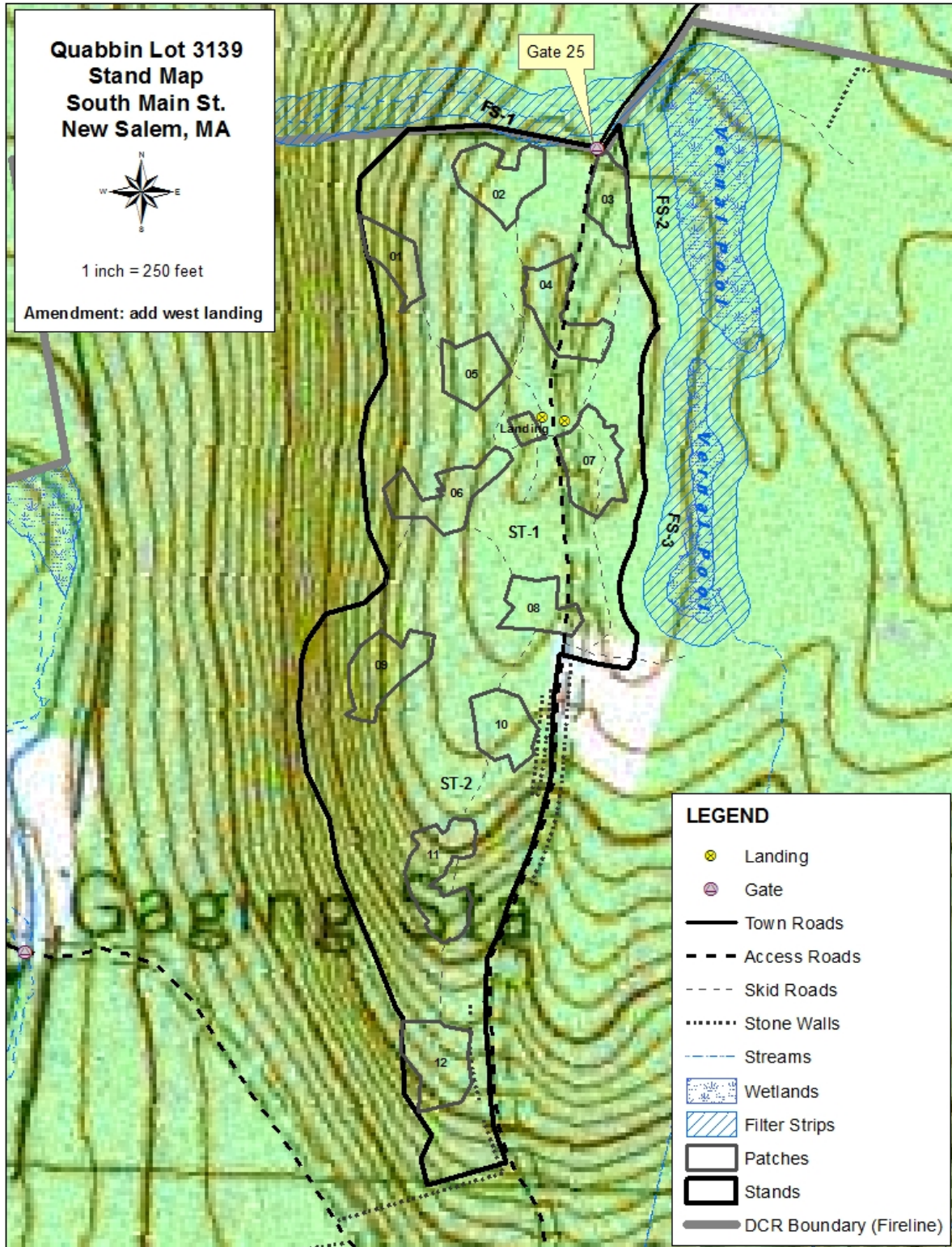
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**Quabbin Lot 3139
Stand Map
South Main St.
New Salem, MA**



1 inch = 250 feet

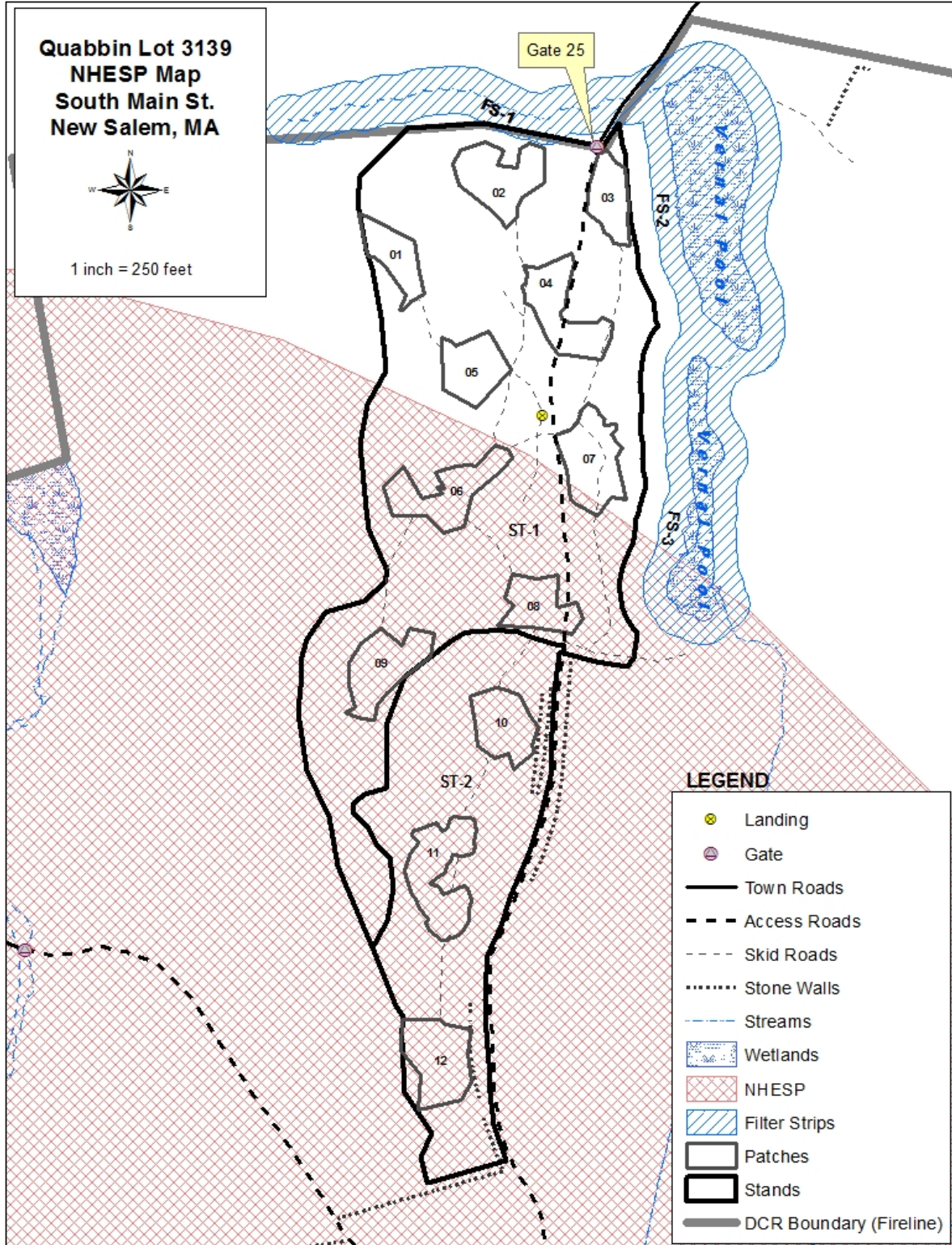
Amendment: add west landing

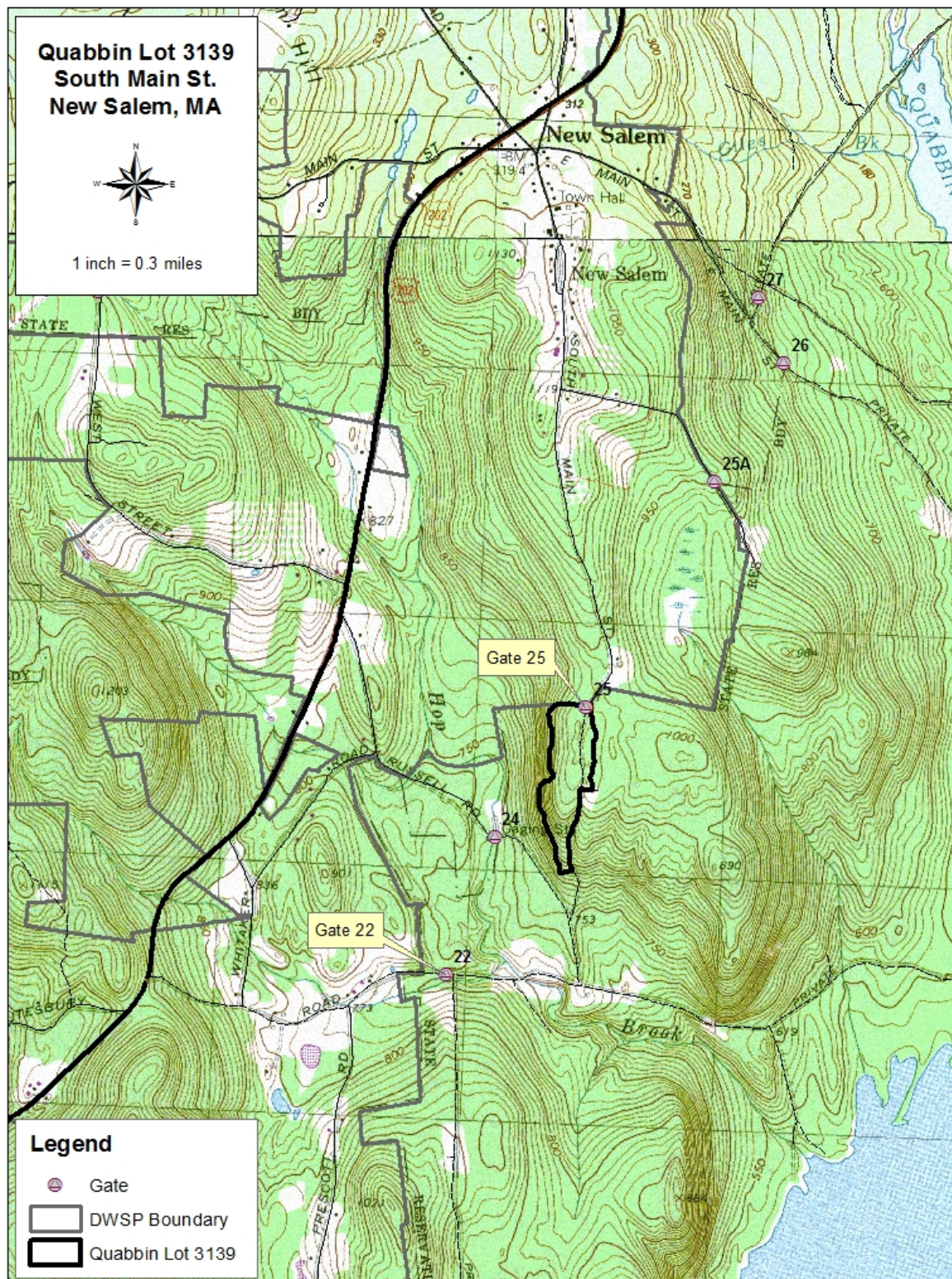


**Quabbin Lot 3139
NHESP Map
South Main St.
New Salem, MA**



1 inch = 250 feet







Division of Fisheries & Wildlife

Jack Buckley, *Director*

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

Cutting Plan No.	204-7780-16
NHESP Tracking No.	15-34795
Town	New Salem
Road	South Main Street
Landowner	DCR-DWSP
Preparer	Helen Johnson
Date	September 18, 2015

Dear Fletcher,

The Natural Heritage and Endangered Species Program (NHESP) of the Massachusetts Division of Fisheries and Wildlife ("the Division") has reviewed the above-referenced Forest Cutting Plan (hereinafter "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: New Salem Conservation Commission (via e-mail)



dcr



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

FILE # 204-7780-16



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-DWSF Quabbin 485 Ware Rd Belchertown MA 01007 in accordance with the
(Name of Owner) (Address)

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

South Main St. lot. #3139

Approval Date 9/18/2015

Director's Agent Fletcher Clark

DCR Phone No. 413-262-2367

ISSUED BY:

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

Figure 2. Photo Series 1: Opening on the east side of the access road.

A. **Before harvest, December 2015.** Note snag (dead tree) to be retained on right side of photo.



Close-ups of snag at the right side of the above photo, with frass mound at the base.



B. Immediately after harvest, June 2016.



C. One Year Later, August 2017.



Figure 3. Photo Series 2: Opening on the west side of the access road.

- A. **Before harvest, December 2015.** Orange flagging marks trees to be retained at edge of opening. Note lack of seedlings, saplings, or any other plant growth on the forest floor.



- B. **Immediately after harvest, June 2016.** The large log near the center will provide wildlife habitat as it decays.



C. One Year Later, August 2017



Figure 4. Photo Series 3: Opening south of the fire line, near the north edge of the lot.

A. Before harvest, December 2015.



B. Immediately after harvest, June 2016. The red oak in the opening was retained for seed and age class diversity.



C. One Year Later, August 2017

