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: 3135
DWSP Proposal ID: PR-13-08
DCR Forest Cutting Plan File Number: 204-6847-14

Site Information
Watershed: Quabbin
Town(s): New Salem
Acres: 10
Nearest Road: Cooleyville Rd.
Natural Heritage Atlas overlap?: No
Public Drinking Water Supply Watershed?: Yes
Forest Types: White Pine/Red Pine
ACEC?: No
Soils: Montauk fine sandy loam; very stony Henniker sandy loam
Wetland Resources: None
Vernal Pools: None

Harvest Information
Harvest Start Date: April 1, 2014
Harvest End Date: July 1,2016
Number of Wetland Crossings: None
Number of Stream Crossings: None

Best Management Practices Applied
Stream Crossings: None
Filter Strips: None
Wetland Crossings: None
Harvesting in Wetlands: None

DWSP Forester supervising this harvest
Name: Derek Beard
Forester License #: 14
Phone #:
Email: derek.beard@mass.gov

General Description/Forest Composition/History

This timber lot is located on the Prescott Peninsula, south of the reclaimed University of Massachusetts Astronomy site; along the east side of the Gate 17 road; the primary access through the peninsula. The forest is composed of White and Red Pine likely planted in the late 1930s. A thinning was completed in 1991. Proceeding the thinning, Red Oak seedlings where planted. As part of the 1927 original taking, this area was classified as arable and likely open (not forested) before public ownership. Believing that forest was the preferred watershed cover, early managers were quick to colonize these open areas with softwood plantations; like this one.

Site Selection

The primary goal of the watershed forest management program is to create and maintain a forest that provides high quality drinking water to current users and future generations. In order to achieve this, the forest should contain a diversity of species in various stages of development (seedlings through large legacy trees). In addition, the forest should be vigorous; actively growing and regenerating. Forest in this condition is ideally suited to be resilient to and quickly recover from small and large scale disturbances such as disease, insect infestation, ice storms and hurricanes.

Objectives

Guided by the principals above, the foremost intention of this timber harvest is to address the lack of structural diversity. The whole of this area is dominated by relatively high canopy forest. Creating a series of small openings (each 1/3 of an acre or smaller) should spur development of young forest that is distributed through the area. Success will create two distinct age/size classes growing amongst each other. Furthermore, the richer soils of this arable site favor development of hardwoods verses the existing white/red pine plantation forest cover. A secondary intention of this harvest is to reduce the red pine component; a regionally non-native species that has recently succumbed to an insect/disease cycle, ravaging many of the reservoir edge stands.

Cultural Resources

The harvest area is flanked to the north and south by old farmsteads, evidenced by cellar holes and barn foundations. Several stone walls traverse the area as well as form its boundary. Three fieldstone lined wells exist; one in the middle of the area; and the others just beyond the southern boundary. All, particularly the one within the area, will be identified for protection during operation.

Wildlife Resources

The harvest area does not overlap or abut any priority floral or faunal habitat; as compiled by MA Fish & Wildlife's Natural Heritage & Endangered Species program. No unusual wildlife, or evidence of, has been seen in, or adjacent to, the area. Maintenance of habitat mainly in the form of partially alive and dead standing trees, known as *snags,* will be a priority.

Figure 1. Final report forest cutting plan

Figure2. Camera Post A photos

Figure 3. Camera Post B photos

Figure 1

01-28-14A11:29 RCVD

AJ

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)

TIMBER LOT 3135 FINAL

CR: None

For DCR Use Only:

File Number	204-6847-14	Case No.	
Date Rec'd	1-28-14	Nat. Hert.	No
Earliest Start	2-12-14	Nat. Hert. Imp.	N/A
River Basin	Chicopee	Pub. Dr. Wat.	No
Gen. Obj.	WT	ACEC	No

Site Information

Location

Town: New Salem
Road: Gate 17
Acres: 10 Proposed Start Date:
Vol. MBF: 89.7 Vol. Cds.: 27 Vol. Tons: 208

Plan Preparer

Name: Derek Beard
Address: DCR – Div. of Water Supply Protection
21 Elm St.
Town, State, Zip: New Salem, MA 01355
Phone: 978-544-6343
Type of Preparer: LF
*Mass. Forester License #: 14
*Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name: DCR – Div. of Water Supply Protection
Mailing Address: 485 Ware Rd.
Town, State, Zip: Belchertown, MA 01007
Phone: 413-323-6921
Ch61☐ 61A☐ 61B☐ Stew☐ *Case #
CR☐ CR Holder

Licensed Timber Harvester**

Name: King Timber Harvesting
Address: 15 Ragged Hill Rd
Town, State, Zip: Hubbardston, MA 01452
Phone:
Mass. Lic. Harvester #: 128

**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				
Existing Structure				
Type of Bottom				
Bank Height (ft)				
Stabilization				

Harvesting in Wetlands

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				
Mitigation				
Stabilization				

Service Forester Comments

Filter Strips

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

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

TIMBER LOT 3135

Forest Products

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	21.4	Red Maple	
Red Pine	64.8	Sugar Maple	
Pitch Pine		Red Oak	
Hemlock		Black Oak	
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	3.5
White Ash		**Total Mbf**	89.7
Beech		**Cordwood (Cds)**	27
White Birch		**SW Pulp (Tons)**	208
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	WP/RP			
Acres	10			
Landowner Objective	LT			
Designation of Trees	CT			
Type of Cut	SE			
Source of Regeneration	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 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.

William E Pale — Signature of landowner(s)

1-27-14 — Date

Service Forester

Determination and Status

304.6847.14

	Approved	Disapproved	Expires
Cutting Plan	☑	☐	1.29.2016

H J Johnson — Signature of Service Forester/Director's Agent

1/29/14 — Date

			Expires	Ser. For. Ins.
Extension	1☐	2☐	/	/

	App 1	Dis 1	App 2	Dis 2	
Amendment	☐	☐	☐	☐	/

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

3/7/16 — Date

Codes

Forest Types
WP White Pine
WK WP/Hem
WH WP/Hdwd
WO WP/Oak
RP Red Pine
SR Red Spruce
HK Hemlock
HH Hem/Hdwd
BC Blck Cherry
BB Bee/Bir/Map
OH Oak/Hdwd
OR N Red Oak
OM Mixed Oak
RM Red Maple
BE Beech
SF Spruce/Fir
SM Sugar Maple
PP Pitch Pine

Designation of Trees
CT Cut Tree
LT Leave Tree
SB Stand Boundary
OT Other

Landowner Objective
LT Long-term Mgt
ST Short-term Har.

Type of Cut
SH Shelterwood
ST Seed Tree
CC Clear Cut
SE Selection
SA Salvage
SN Sanitation

Intermediate Harvests:
CT Commercial Thin
NT Non Com Thin

Non-Standard Systems:*
HG Highgrade*
DL Diameter Limit*
OT Other*

Source of Regeneration
AD Advanced
SE Natural Seed
PL Plant
CO Coppice
DS Direct Seed
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.

TIMBER LOT 3135

Landowner DCR-DWSP

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.

Harvest consists of a series of small openings. Each opening is less than or equal to a third (.3) of an acre in area.

Main skid trails are delineated with orange paint.

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.

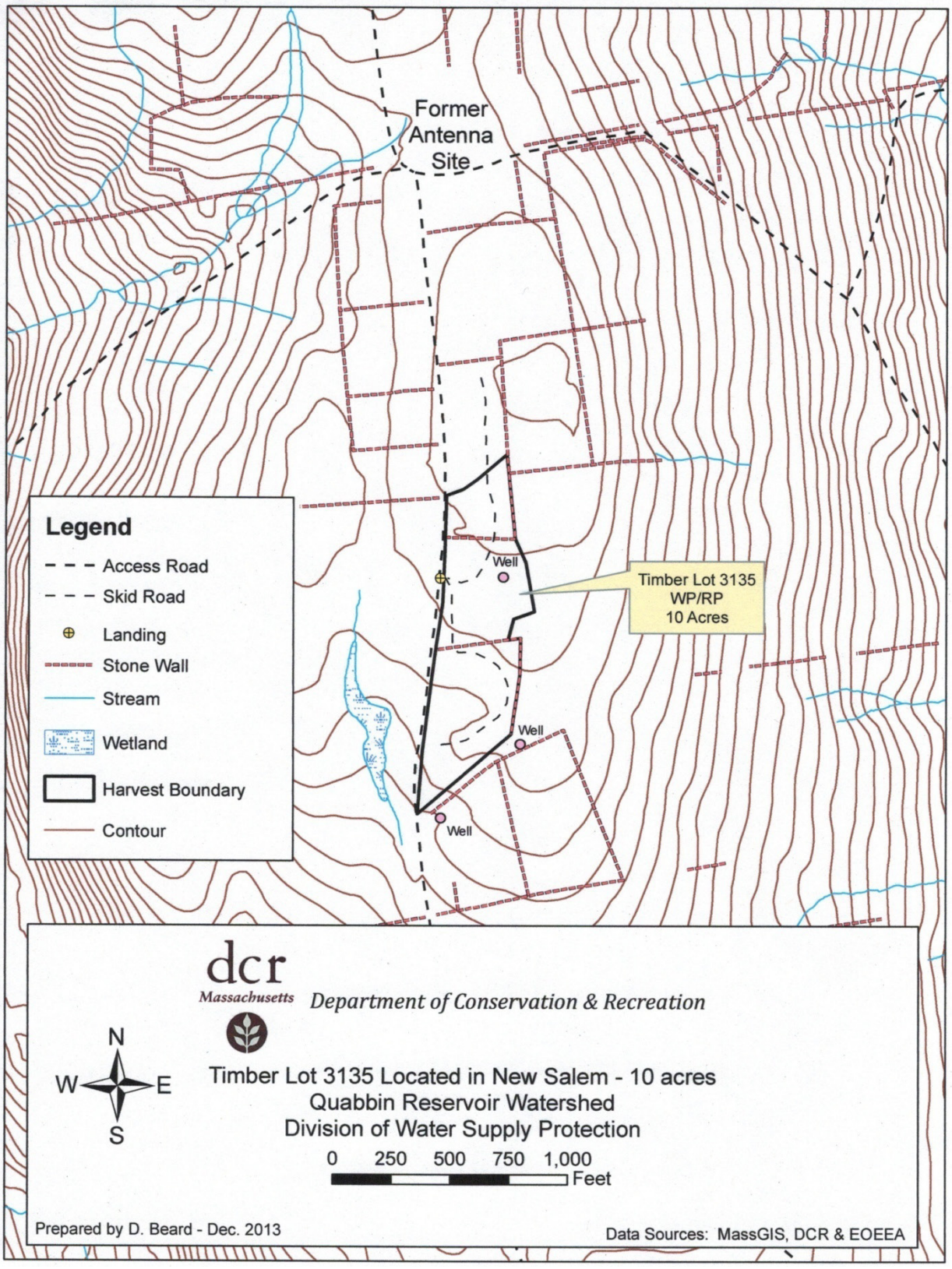
Stand No.	Species to be Cut	Size of Trees to be Cut	Quality of Trees to be Cut	% BA/Acre Removed

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


Former
Antenna
Site
Legend
Access Road
Skid Road
Landing
Stone Wall
Stream
Wetland
Harvest Boundary
Contour
Well
Well
Well
Timber Lot 3135
WP/RP
10 Acres
dcr
Massachusetts
Department of Conservation & Recreation
N
W
E
S
Timber Lot 3135 Located in New Salem - 10 acres
Quabbin Reservoir Watershed
Division of Water Supply Protection
0 250 500 750 1,000
Feet
Prepared by D. Beard - Dec. 2013
Data Sources: MassGIS, DCR & EOEEA

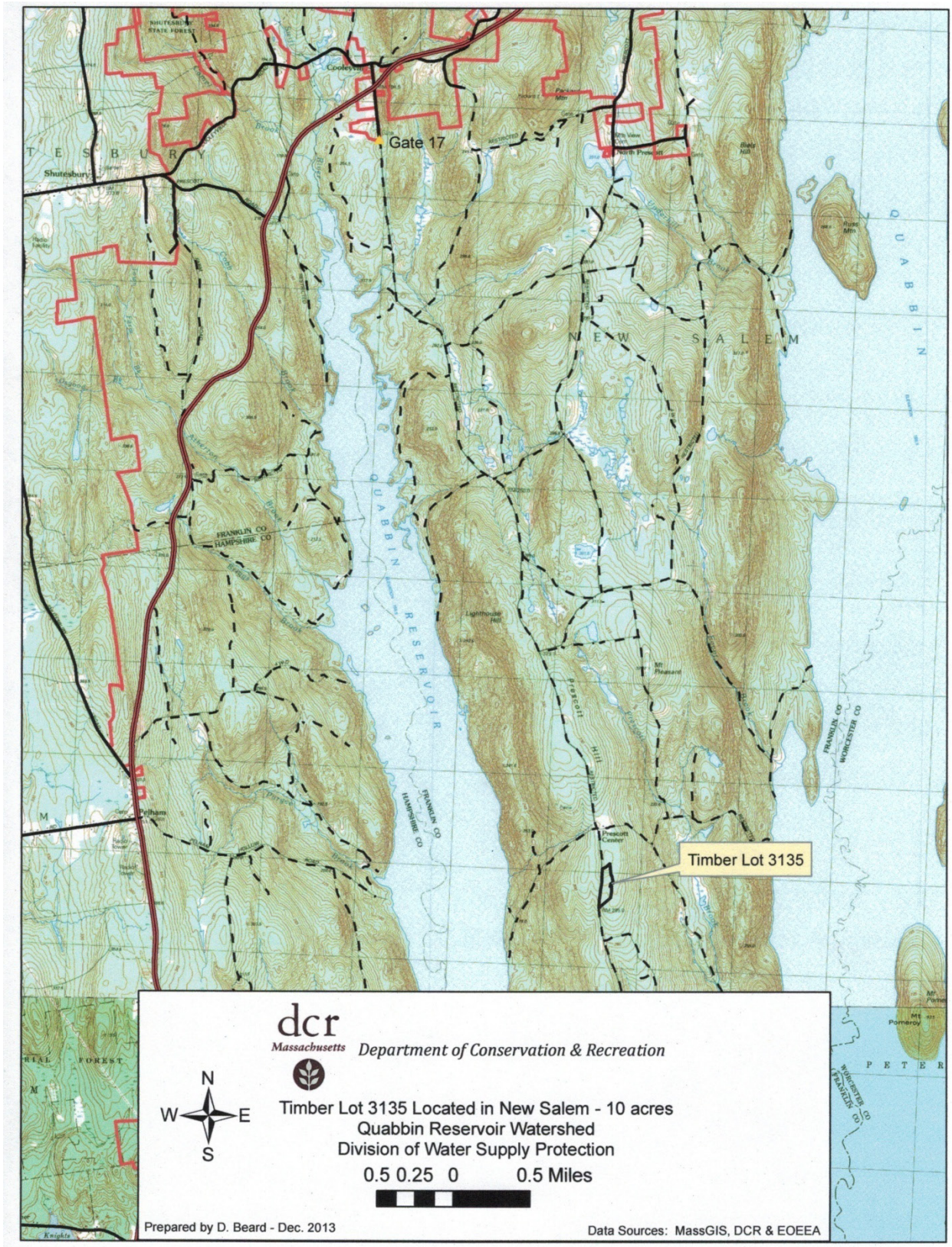

Gate 17
Timber Lot 3135
NEW SALEM
QUABBIN RESERVOIR
Shutesbury
Cooleyville
Pelham
Prescott Center
Mt Pomeroy
FRANKLIN CO
HAMPSHIRE CO
WORCESTER CO
dcr
Massachusetts
Department of Conservation & Recreation
N
W
E
S
Timber Lot 3135 Located in New Salem - 10 acres
Quabbin Reservoir Watershed
Division of Water Supply Protection
0.5 0.25 0 0.5 Miles
Prepared by D. Beard - Dec. 2013
Data Sources: MassGIS, DCR & EOEEA

Figure 2: Pre-Harvest Photograph, A (November 2013)

Red and White Pine overstory shading a dense understory of Hayscented Fern. Rock outcrop in left foreground.

Post Harvest Photograph, A (October 2015)

Small opening with fairly good scarification, or duff layer disturbance, which is an important factor in seedling germination.

After one growing season: A (July 2016)

The increased sunlight is triggering herbaceous growth which hopefully will include some raspberry and tree seedlings to break up the dense fern layer.

After two growing seasons: A (August 2017)

Continued herbaceous understory development.

After three growing seasons: A (July 2018)

After 5 growing seasons: A (July 2020)

After 6 growing seasons A (June 2021)

After 8 growing seasons: A (July 2023)

After 9 growing seasons: A (July 2024)

Figure 2: Pre-Harvest Photograph, B (November 2013)

Similar over and understory composition with the addition of Black Berry (Rubus spp) in the middle background.

Post Harvest Photograph, B (October 2015)

Small opening with plenty of coarse woody debris which will decompose providing soil nourishment and wildlife habitat. In the center background is an excellent white ash tree which provides some species diversity and a local seed source.

After one growing season: B (July 2016)

Center background of the frame is the excellent white ash surrounded by a raspberry patch. Hopefully the increased sunlight will trigger expansion of the patch, breaking up the dense fern layer.

After two growing seasons: B (August 2017)

Robust herbaceous understory development.

After three growing seasons: B (July 2018)

Rust colored red pine needles indicate infestation of red pine scale insect.

After 5 years of growth B: (July 2020)

 Red Pine has died from scale insect infestation

After 6 years of growth B: (June 2021)

After 8 growing seasons B: (July 2023)

White Ash (center) has scant foliage. Tree succumbing to Emerald Ash Borer infestation.

After 9 years of growth B: (July 2024)