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: 5291
DCR Forest Cutting Plan File Number: 282-28953-21

Site Information

Watershed: Wachusett	**Town(s)**: Sterling
Acres: 47.8	**Nearest Road: Princeton Road (Rt. 62)**
Natural Heritage Atlas overlap?:	**Public Drinking Water Supply Watershed?:** Yes
Forest Types: White pine-oak and Red oak	**ACEC?: No**
Soils: Primarily Canton fine sandy loam along with Merrimac and Hinckley loamy sands.	
Wetland Resources: Two very small intermittent brooks flow through this area.	
Vernal Pools: None	

Harvest Information

DWSP Permit Start Date: 12/2/20	**DWSP Permit End Date:12/15/22**
Number of Wetland Crossings: None	**Number of Stream Crossings:** 2

Best Management Practices Applied

Stream Crossings	The old stone culvert at SC-1 will be protected by bridging regardless of stream flow. The old culvert at SC-2 will only be protected if water is flowing at the time of operation.
Filter Strips	No trees are being cut in the filter strips.
Wetland Crossings	There are no wetland crossings.
Harvesting in Wetlands	There is no harvesting in the wetlands.

DWSP Forester supervising this harvest
Name: Greg Buzzell
Forester License #:025
Phone #:774-261-1841

NARRATIVES

General Description/Forest Composition/History:

A forest management operation was performed in most of this area in 2006. At that time, the understory in the red oak stand was primarily mountain laurel with very few young trees. Fortunately, the mountain laurel was not exceedingly thick at that time. There was less mountain laurel and more young trees in the white pine-oak stand. For this reason, 5 openings were made in the white pine-oak stand totally 4.7 acres. In the red oak stand, with the goal of encouraging the establishment of advance regeneration, the overstory was heavily cut, removing approximately 50% of the stocking while requiring that the mountain laurel be mechanically damaged as much as possible. This was done in 3 large blocks totaling nearly 5 acres. This was very successful, and today there is excellent numbers and diversity of seedlings and saplings in these 3 blocks. It's clear that not only was there the establishment of new seedlings following the harvest, but that the scattered regeneration that was struggling under the mountain laurel was able to take advantage of the increased light and has now grown above the laurel.

The age structure for Working Unit #124 is as follows: 12%, 0-20 years old, 6%, 21-40 years, 9%, 41-60 years, 16%, 61-80 years, 0%, 81-100 years and 57%, >100 years old. The oldest stands originated in about 1910 making them 109 years old.

Site Selection:

The ideal watershed protection forest is one which best serves the function of the land as a producer of high-quality drinking water in both short- and long-term. This forest must be vigorous and diverse in tree species and ages, be actively accumulating biomass and actively regenerating. Such a forest will be ideally suited to be resilient to and quickly recover from small- and large-scale disturbances such as diseases, insect infestations, ice storms and hurricanes.

Silvicultural Objectives:

With the goal of forest management being the establishment of a young class on in this area, the presence of good advance regeneration, well distributed throughout this area, should make this achievable. To that end, 5.3 acres of young forest will be released by creating 5 openings in the overstory forest. These openings range from 0.6 to 2.1 acres in size with an average size of 1.3 acres.

Cultural Resources:

This lot was reviewed by the DCR archaeologist and all recommendations will be followed. There is no known cultural significance to this area, either historically or pre-European contact. All stone walls on DCR property are valued as a cultural resource, so the stone walls on this property will be protected from damage to the extent possible.

Wildlife/Rare or Endangered Species:

There are no critical habitats or known rare or endangered plants or wildlife.

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	322-2895321	Case No.	/
Date Rec'd	7.24.20	Nat. Hert.	NO /
Earliest Start	9.10.20	Nat. Hert. Imp.	NO
River Basin	NASHUA	Pub. Dr. Wat.	WACHUSETT
Gen. Obj.	LT	ACEC	NO

Site Information

Location

Town Sterling Lot 5291
Road Princeton Road (Rt 62)
Acres 47.8 Proposed Start Date 09/20
Vol. MBF 33.0 Vol. Cds. 72 Vol. Tons 12

Plan Preparer

Name Gregory S. Buzzell
Address 180 Beaman Rd.
Town, State, Zip West Boylston, MA, 01583
Phone 774-261-1841
Type of Preparer Mass. Licensed Forester
*Mass. Forester License # 25
*Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name DCR/DWSP/OWM Wachusett/Sudbury
Mailing Address 180 Beaman St.
Town, State, Zip West Boylston, MA 01583
Phone 608-792-7806
Ch61 ☐ Ch61A ☐ Stew ☐ *Case #
Est. Stumpage Value

Licensed Timber Harvester**

Name To be supplied when known.
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	CU		
Existing Structure	NO	Yes		
Type of Bottom	ST	GR		
Bank Height (ft)	1	1		
Stabilization	CO	CO/MU		

Wetland 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	

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%?)				

Service Forester Comments

*PLAN REVIEWED UNDER MODERATE/SEVERE DROUGHT CONDITIONS
*SKID ROADS / TRAILS ARE EXISTING
* SC-1 + SC-2 LOCATED ON EXISTING WORK ROADS

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

Forest Products

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	8.8	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	20.9
Hemlock		Black Oak	2.7
Spruce		White Oak	0.6
Other Sftwd.		Other Hdwd.	
White Ash		**Total Mbf**	33.0
Beech		**Cordwood (Cds)**	72
White Birch		**SW Pulp (Tons)**	
B & Y Birch		**HW Pulp (Tons)**	12
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	OR	WO	MH	WH
Acres	17.0	14.8	8.0	8.0
Landowner Objective	LT	LT	LT	LT
Designation of Trees	CT	CT	OT	OT
Type of Cut	SH	SH	OT	OT
Source of Regeneration	AD	AD	n/a	n/a

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) — Date: 8/19/2020

Service Forester

Determination and Status 282-27953-21

	Approved	Disapproved	Expires
Cutting Plan	☒	☐	8-26-2022

Signature of Service Forester/Director's Agent — Date: 9-10-2020

			Expires	Ser. For. Ints.
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 — 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

Use only if further explanation is required of information on pages one or two or if "other" was used in any category.

Landowner: DCR-DWSP

Town: Sterling

File Number: 282-28953-21

BMPs

While there is an existing culvert at SC-1, it is very old and partially collapsed. Timber bridges, swamp mats or steel plates will be needed to prevent further damage to the culvert.
There is also an existing culvert at SC-2. This intermittent stream rarely flows. Given the condition of the old cart path at SC-2, if no water is flowing, then no crossing structure is required. Otherwise, depending on the conditions at the time, poles or tops or mats will be used if necessary.

No trees are being cut in any of the filter strips.

Silviculture

In order to release advance regeneration, 4 openings in the overstory are being created, covering 5.3 acres. These openings range from 0.6 to 2.1 acres in size with an average of 1.3 acres. They are well distributed throughout the sale area focusing on where the advance regeneration is well established. Some of these are where a timber harvest was performed in 2005 with the intent of creating the conditions where regeneration could become established.

No trees are being cut in ST-3 or ST-4.

Objectiv

The objective of this operation is to diversify the age structure of the forest by removing the overstory in patches thereby releasing the advance regeneration. The current age structure is limited with an insufficient component of young forest.

Other

Only the haul road that connects the second most southerly opening to the most southerly opening has been flagged.
The main haul road that includes the two stream crossings, is an old cart path and has not been flagged nor has the mowed path through the field that leads to the most northerly crossing.

dcr

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

FILE # 282-28953-21

FOREST CUTTING PLAN CERTIFICATE

W

Post this in a conspicuous place within the area in which the harvesting operation is to take place.

This certifies that DCR/DWSP/OWM (Name of Owner) West Boylston (Address) in accordance with the provision of M.G.L. Chapter 132, Section 40-46, filed in CLINTON with the Dept. of Conservation and Recreation, Division of State Parks and Recreation, a Notice of Intent to cut forest products upon the BALL BROOK lot.

LOT 5291

Approval Date 9.10.2020

Director's Agent MICHAEL DOWNEY

DCR Phone No. 978-368-0126

ISSUED BY: Priscilla Geigis

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

Figure 2. Map of harvest area showing approximate boundary, proposed openings and other features.

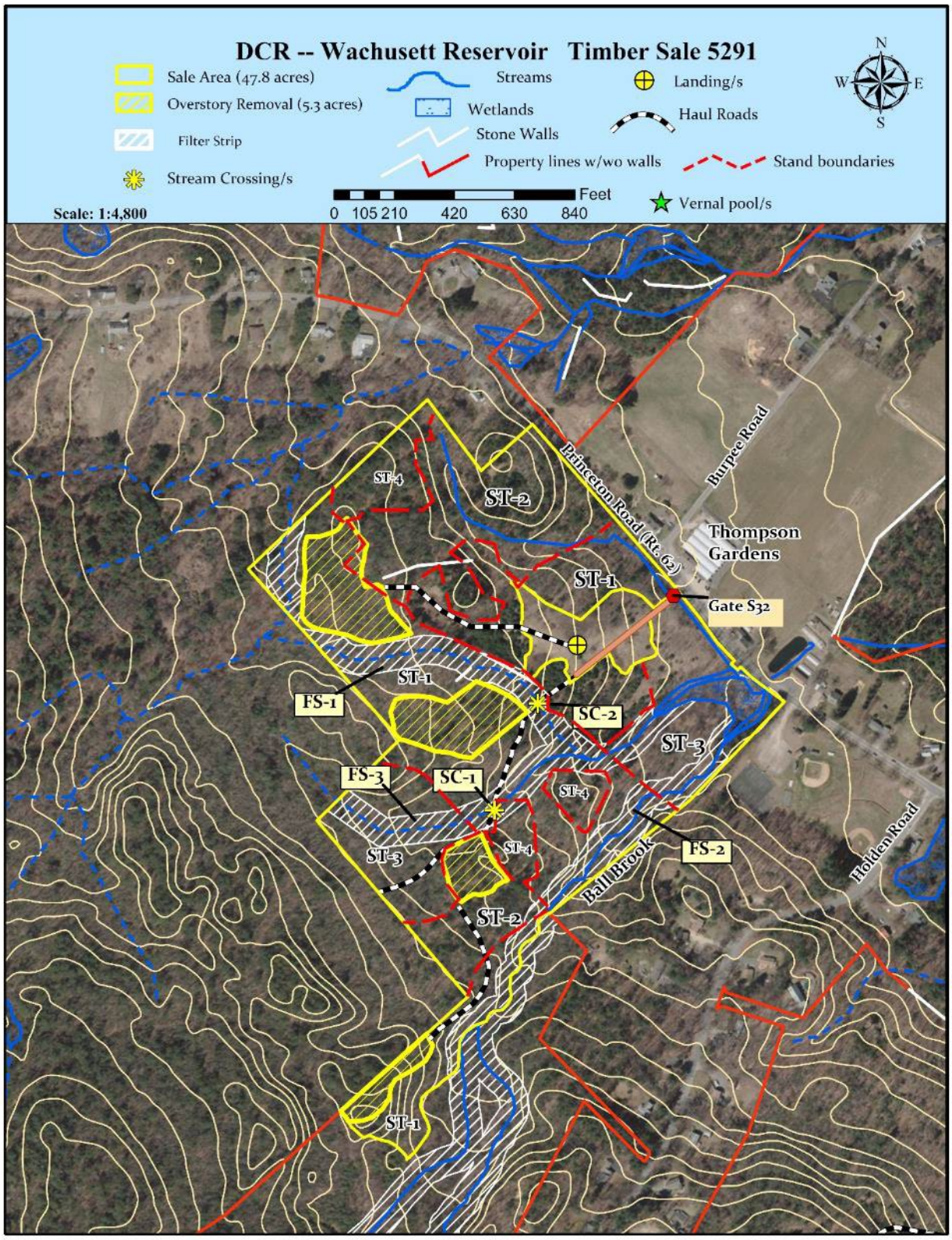

Figure 3. General locus map showing the location of the proposed timber harvest.

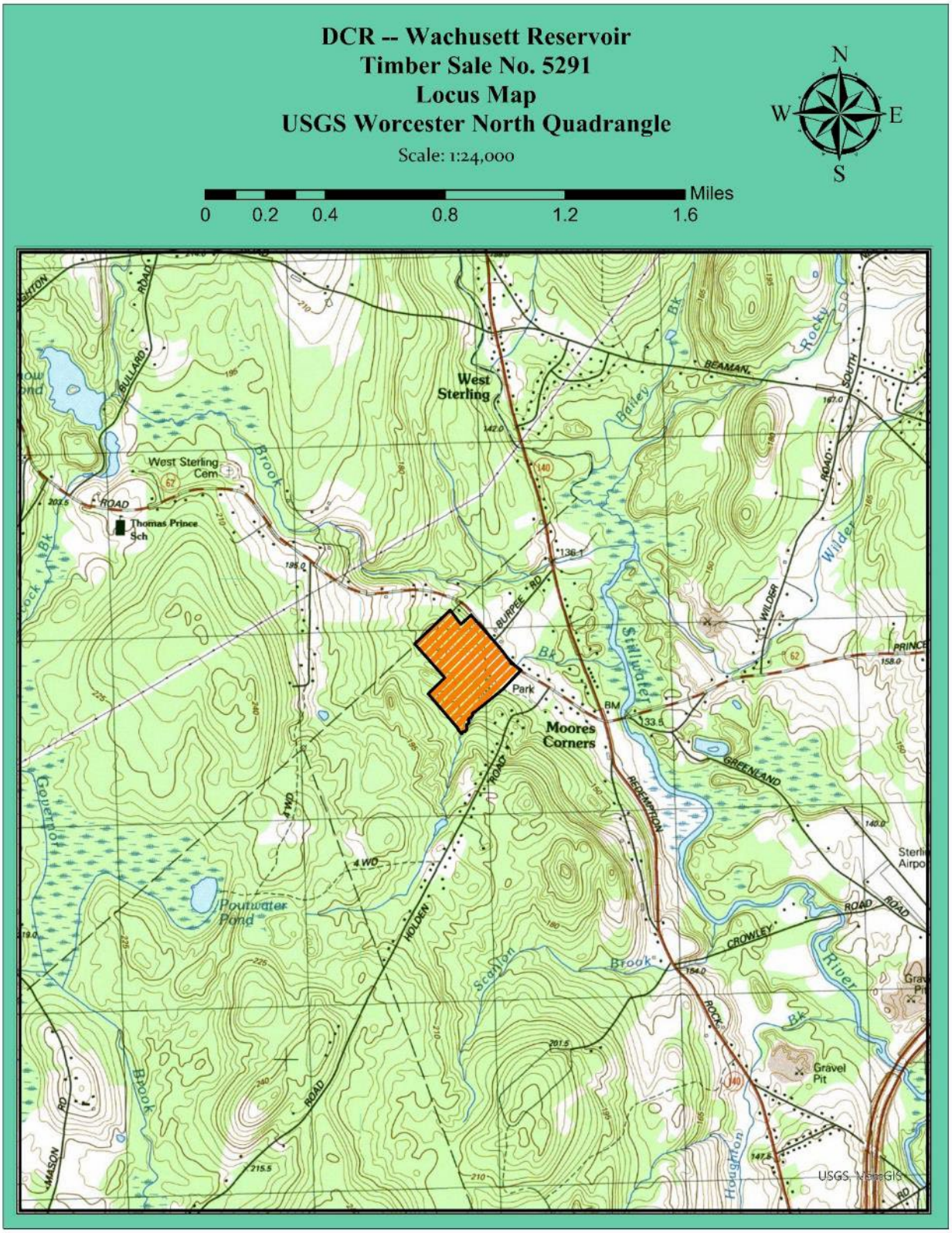

Figure 4. Pre-Harvest Photographs, A-C

A. The landing location will be in the old field inside Gate S32.

B. The older trees are being removed to give the white pine and hardwood saplings room to grow. Note the large black oak in the foreground which is being retained within this area to provide valuable structural diversity.

C. Another area with an excellent understory of white pine and hardwood saplings. In this case, the large white pine in the middle of the photo is being retained.

Silvicultural Achievements:

4 openings were created in the overstory covering 5.3 acres. Openings were made in a variety of sizes from 0.6 acre to 2.1 acres in size. They are well distributed throughout the area and took advantage of advanced regeneration comprised of oaks, maples, birches, white pine and other hardwoods.

Figure 5. Post-Harvest Photographs A-B

A. Completed opening with hardwood and pine regeneration, large and small diameter snags and a large white oak retained.

B. Completed opening with large diameter oak and pine retention, White pine and hardwood regeneration now released to the sun.