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

Forest Management Project Summary

Project Title: Lot 5308
DWSP Harvest Permit Number: 5308
DWSP Proposal ID: WA-23-242
DCR Forest Cutting Plan File Number: 134.42931.25

Site Information
Watershed: Wachusett
Town(s): Holden
Acres: 52
Nearest Road: Princeton Street
Natural Heritage Atlas overlap?: Yes
Public Drinking Water Supply Watershed?: Yes
Forest Types: Mixed oak, White pine, Northern Red Oak
Area of Critical Environmental Concern (ACEC)?: No
Soils: Hinckley loamy sand, Merrimac loamy sand, various silt loams
Wetland Resources: There's a narrow wetland associated with the Quinapoxet River.
Vernal Pools: There's a vernal pool near the previously mentioned narrow wetland.

Harvest Information
Harvest Start Date: 09/25/2024
Harvest End Date: 12/12/2028
Number of Wetland Crossings: Two
Number of Stream Crossings: One

Best Management Practices Applied
Stream Crossings: This is the culverted crossing of Bear Brook on the old railroad bed.
Filter Strips: There's a variable-width filter strip associated with Bear Brook and the Quinapoxet River. No trees are being cut in either filter strip.
Wetland Crossings: Both wetland crossings will utilize swamp mats.
Harvesting in Wetlands: None

DWSP Forester supervising this harvest
Name: Greg Buzzell
Forester License number: 025
Phone number: 774-261-1841
Email: greg.buzzell@mass.gov

Narrative

General Description/Forest Composition/History

This area is divided in two by a wetland that extends south from the Quinapoxet River. The larger western part is dominated by oaks. In the higher and drier parts, red oak, black oak, red maple and white oak predominate in the overstory with patches of mountain laurel, lowbush blueberry, hazelnut and witch-hazel in the understory. Where it's lower and a bit damper, red oak dominates the overstory with a witch-hazel, hazelnut, mountain laurel and maple-leaved viburnum shrub layer. In the mixed hardwood stand at the toe of the slope abutting the Quinapoxet River there is red oak, red maple and yellow birch in the overstory with scattered sugar maples. On the west-facing slope immediately adjacent to Bear Brook there are a few hemlocks and hobblebush and striped maple in the understory.

There is evidence of past logging only in the western half of this western portion which was purchased in 1997. There are very old stumps and multi-stemmed red maples only in the higher drier area adjacent to the aqueduct right-of-way. Otherwise, there are single-stemmed red oaks of good to excellent quality throughout this area. There are some very old looking white oaks at the top of a slope that have barbed wire in them.

The smaller eastern part of this sale area is dominated by white pines in the overstory that were planted in 1919. There's a group of large white oaks in the middle of this area that have an open-growth form indicating that they pre-date the planting of the pines. The understory shrub layer is comprised of hazelnut, witch-hazel, mountain laurel and maple-leaved viburnum. The mountain laurel is very thick on the west-facing slope near the wetland.

There is excellent advance regeneration throughout this entire sale area but particularly in the eastern portion under the white pine stand. It's almost entirely comprised of hardwood species, especially red oak, red maple, white oak, yellow birch and black cherry. In the western part, it's made up of red maple, red oak, white pine and American chestnut.

The age structure of this working unit is currently as follows: 0%, 0-20 years old; 0%, 21-40 years, 0%, 41-60 years; 9%, 61-80 years; 14%, 81-100 years and 77%, >100 years old. A narrow band of mixed oak forest near the base of the hill at the confluence of Bear Brook and the Quinapoxet River originated in about 1880 making it about 144 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 excellent and diverse understory of saplings that are well suited to this site, a new age class will be created in this forest. This will be accomplished through the removal of the overstory in patches that range in size from 0.75 acres to 2 acres and total 11.8 acres. Given the species composition of the regeneration, this new age class will have a similar diversity to the overstory although the relative amounts of each species will change especially with there being less white pine.

Cultural Resources

The Quinapoxet Mills was located on the north side of Mill St. and it gave this former village of Holden the name Quinapoxet. There is a borrow pit in the side of the hill at the west end of where the dam was located. There is another borrow pit immediately adjacent to Mill Street just on the west side of the Quinapoxet River bridge.

Rare or Endangered Species

NHESP has determined that certain state-listed sensitive species or habitats may exist within the lot proposal area. To protect them from unnecessary disturbance, detailed information regarding affected species and their locations is not included in this report. DWSP will coordinate with NHESP and follow recommendations to protect these species during the proposed activity.

Figures

1. Figure 1. Forest Cutting Plan
2. Figure 2. Maps of harvest area showing approximate boundary, proposed openings and other features
3. Figure 3. General locus map showing the location of the proposed timber harvest
4. Figure 4. Pre-Harvest Photographs, A-C
5. Figure 5. Post-Harvest Photographs, A-C

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)

AUG 27 2024

For DCR Use Only:

File Number	134.4293.25	Case No.	—
Date Rec'd	08-27-24	Nat. Hert.	Y
Earliest Start	09-11-24	Nat. Hert. Imp.	Y
River Basin	NASHUA	Pub. Dr. Wat.	WACHUSETT
Gen. Obj.	LT	ACEC	N

Site Information

Location

Town Holden Lot 5308
Road Princeton Rd.
Acres 52 Proposed Start Date 10/24
Vol. MBF 176.7 Vol. Cds. 126 Vol. Tons 151

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	CU			
Existing Structure	Yes			
Type of Bottom	OT			
Bank Height (ft)	n/a			
Stabilization	OT			

Wetland Crossings

Indicate location on map	WC-1	WC-2	WC-3	WC-4
Length of Crossing	10'	75'		
Mitigation	OT	OT		
Stabilization	CO	CO		

Filter Strips

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

*NOTIFY DCR SERVICE FORESTER AT START OF HARVEST OPERATION
*SEE ATTACHED NHESP LETTER
→ SEE CANOPY RETENTION REQUIREMENTS
→ SEE MOTORIZED VEHICLE RESTRICTIONS
→ SEE TIME OF YEAR RESTRICTIONS
*REQUIRED BUFFER MARKINGS INSPECTED BY CRC 10/3/24

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	143.9	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	28.5
Hemlock		Black Oak	1.9
Spruce		White Oak	2.4
Other Sftwd.		Other Hdwd.	
White Ash		**Total Mbf**	176.7
Beech		**Cordwood (Cds)**	126
White Birch		**SW Pulp (Tons)**	151
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	OM	OR	WP	BB
Acres	14.0	10.5	11.5	16.0
Landowner Objective	LT	LT	LT	LT
Designation of Trees	CT	CT	CT	OT
Type of Cut	SH	SH	SH	OT
Source of Regeneration	AD/SE	AD/SE	AD/SE	OT

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.

Kelly Freda — Signature of landowner(s)

8/22/24 — Date

Service Forester

Determination and Status 134.42931.25

	Approved	Disapproved	Expires
Cutting Plan	☒	☐	08-27-26

Signature of Service Forester/Director's Agent — 10/4/24 Date

			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/DWM Wachusett/Sudbury

Town: W. Boylston

File Number: 134.42931.25

BMPs

SC-1 is an existing culverted crossing on the abandoned railroad bed which is now a forest road and rail trail.

WC-1 is the narrow outflow from a large seep. It will be bridged.

WC-2 will be crossed with swamp mats.

Silviculture

In order to release advance regeneration, 10 openings in the overstory are being created, covering 11.8 acres. These openings range from 0.75 acre to 2 acres in size with an average of 0.9 acres. They are well distributed throughout the area taking advantage of the advance regeneration comprised of white pine, oaks, and other hardwoods.

Object

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

Haul roads have been flagged.

No trees are being cut in ST-4.

Trees are only being cut within the 10 overstory removal patches and of course, as needed at the landing and along haul roads.

Portions of the sale area are within NHESP Priority Habitats of Rare Species polygon PH 1337.

dcr

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

FILE # 134.42931.25

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 Wachusett/Sudbury W. Boylston (Name of Owner) (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 Princeton Rd lot.

Approval Date 10/4/24

Director's Agent Chris Capone

DCR Phone No. 857-406-0175

ISSUED BY:

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

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

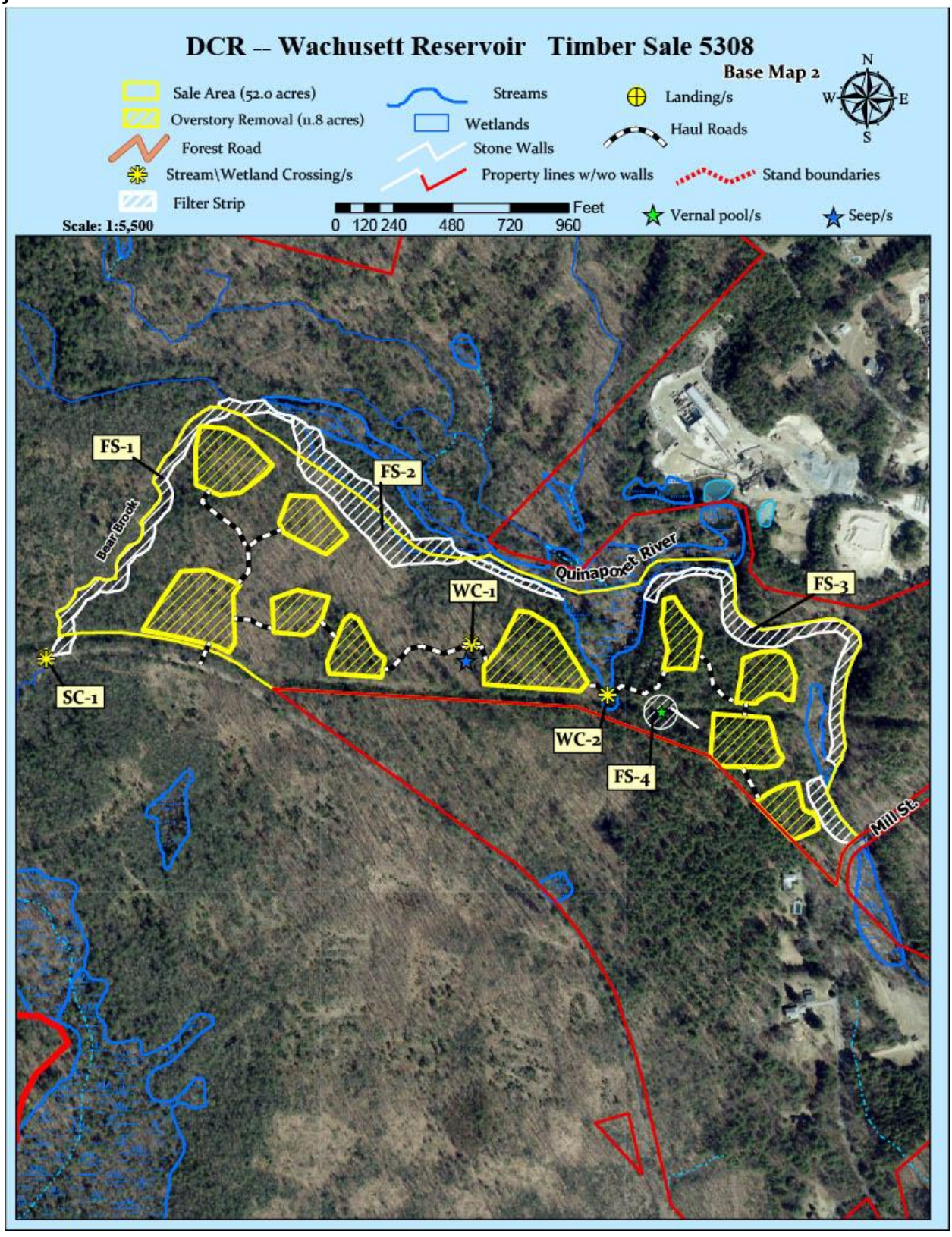

Figure 3. General locus map showing the location of the proposed timber harvest

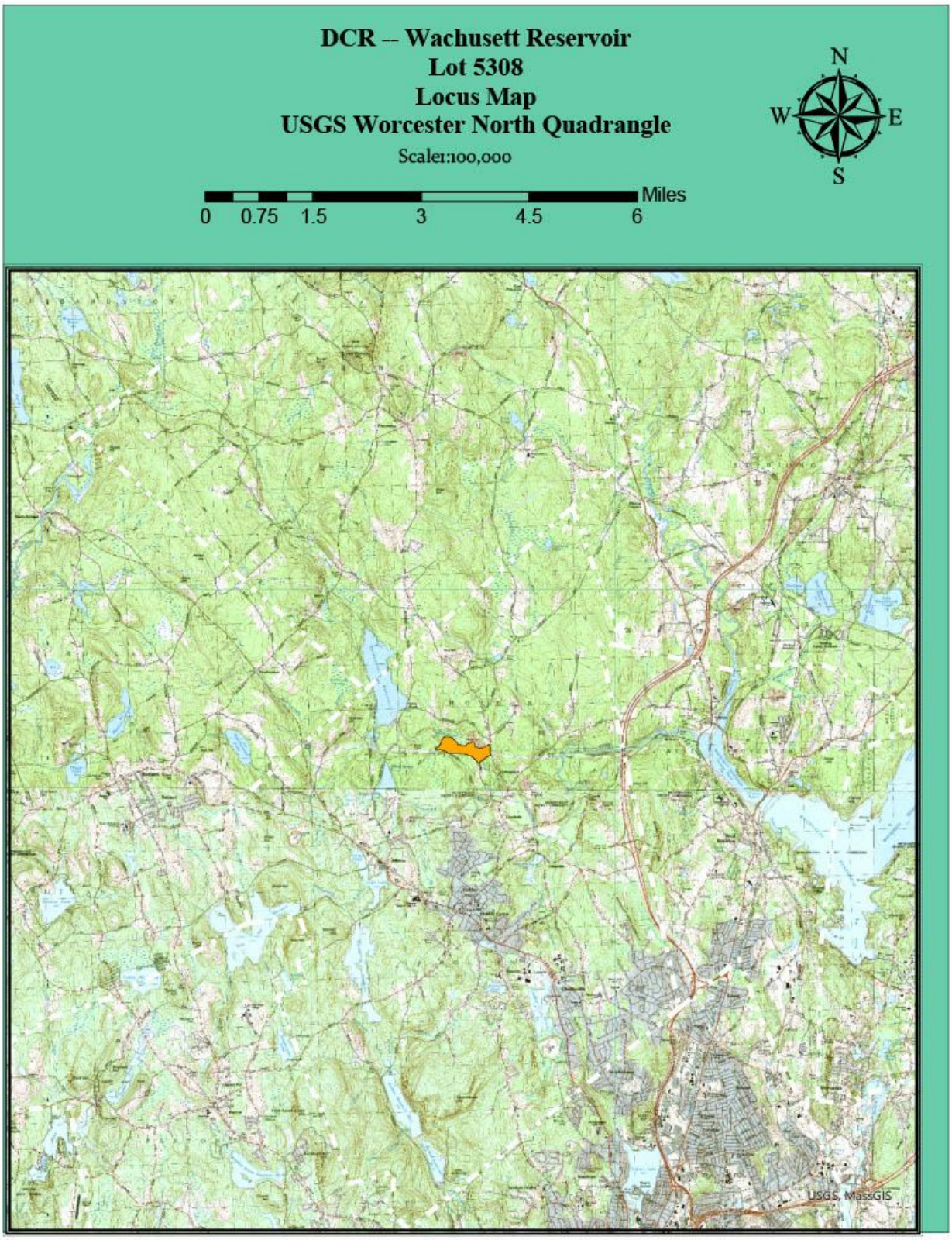

Figure 4. Pre-Harvest Photos, A-C

A. The entrance to the lot from the road on the old railroad bed about 650’ to the east of Bear Brook.

B. The large red oak is being retained in this area of overstory removal to provide vertical diversity to what will become a patch of young forest.

C. The white pine overstory is being removed to release the excellent understory of diverse hardwood species.

Figure 5. Post-Harvest Photographs, A-C

A. The overstory was removed in this area. A good job was performed in protecting much of the hardwood understory and in retaining the larger dead oak and white pine.

B. Another area where the older overstory was removed leaving an understory of younger trees.

C. The portion of the rail trail on the old railroad bed that was used to haul wood out the landing.