

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

Project Title: Lot 5306

DWSP Harvest Permit Number: 5306

DWSP Proposal ID: WA-23-264

DCR Forest Cutting Plan File Number: 134-41549-24

Site Information

Watershed: Wachusett

Town(s): Holden

Acres: 74

Nearest Road: River Road

Natural Heritage Atlas overlap?: Yes

Public Drinking Water Supply Watershed?: Yes

Forest Types: Mixed oak; White pine/Oak; Hemlock/Hardwood

Area of Critical Environmental Concern (ACEC)?: No

Soils: Merrimac and Hinckley sandy loams.

Wetland Resources: None

Vernal Pools: None

Harvest Information

Harvest Start Date: 7/10/2024

Harvest End Date: 6/30/2026

Number of Wetland Crossings: None

Number of Stream Crossings: None

Best Management Practices Applied

Stream Crossings: Not applicable.

Filter Strips: No tree are being harvested in the filter strip.

Wetland Crossings: Not applicable.

Harvesting in Wetlands: Not applicable.

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

The 44-acre portion of this area that is south of the aqueduct right-of-way has had two previous forest management operations. The first was in 1983 (Sale No. 32A). At the time, this entire area was a typical dry-site mixed oak stand with very few, widely scattered white pines in the overstory and little to no white pine regeneration in the understory. The goal of this operation was to thin the overstory and encourage the establishment of white pine regeneration. White pine is well suited to growing vigorously on these deep excessively-drained outwash soils. Having more white pine also increases the species diversity which benefits the overall health and resilience of this forest. The need for more species diversity would have been obvious given the historic spongy moth population explosion that occurred both in this forest and across state in 1981.

However, ten years later, little white pine regeneration had become established in much of these 44 acres. So, in 1994, 18,900 white pine seedlings were planted in the nearly level 25 acres in the core of this area. In 1995, an additional 9,200 white pine seedlings were planted in the same general area.

A second forest management operation took place in 1998 once it was obvious that these planted white pine seedlings had survived. This operation removed the majority of the mixed oak overstory in about 20 acres, giving these pine seedlings the light and space they needed to continue to develop. As a result, there is now a well-established, young forest in 27% of this larger working unit. This vigorously growing young forest is more diverse in species than the older surrounding forest with far more white pine.

In the balance of this area the forest overstory is made up of white oak, black oak and red oak with fewer white pine and red maple and very few, widely scattered pitch pine. There is good advance regeneration that has a good component of white pine. Otherwise, the understory is primarily lowbush blueberry and huckleberry with patches of mountain laurel. A spongy moth infestation in 2019 killed much of the overstory in a couple acres just north of the aqueduct right-of-way. There is a patch of *Viburnum cassinoides* in this area along with some maple-leaved viburnum.

The age structure of this working unit is as follows: 0%, 0-20 years old; 27%, 21-40 years; 0%, 41-60 years; 11%, 61-80 years; 0%, 81-100 years and 62%, >100 years old. The oldest stands originated in about 1910, making them 114 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 seedlings and 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 13 patches that range in size from 0.6 to 2 acres and total 17.1 acres. These patches are distributed, taking advantage of where the advance regeneration is best.

As is typical in the creation of all young forest openings, at least a few overstory trees are retained in each patch, especially those larger than ½ acre in size. Such retention provides important structural diversity and wildlife habitat. Trees chosen to be retained are generally those of better vigor that are more likely to resist the wind once the supporting forest is removed from around them as well as tree species that are either generally rare within the forests of the Wachusett watershed or just unusual for the forest in the immediate vicinity of this timber sale. Also chosen are trees with special wildlife value such as those with cavities or good crown structure for the building of stick nests.

Cultural Resources

This area has been assessed by the DCR Archeologist for both known sites of cultural or archeological importance as well as for potential use by pre-Contact Native Americans.

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

- Figure 1. Forest Cutting Plan
- Figure 2. Maps 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-B

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 34-41544-24 Case No. _____
 Date Rec'd 10-31-23 Nat. Hert. 1 4
 Earliest Start 11-15-23 Nat. Hert. Imp. 4
 River Basin NASHUA Pub. Dr. Wat. WACHUSETT
 Gen. Obj. LJ ACEC NJ

Site Information

Location

Town Holden Lot 5306
 Road River Street
 Acres 71.7 Proposed Start Date 1/2/24
 Vol. MBF 51.0 Vol. Cds. 210 Vol. Tons 39

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				
Existing Structure				
Type of Bottom				
Bank Height (ft)				
Stabilization				

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			

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

- * PLEASE NOTIFY DCR SERVICE FORESTER AT START OF HARVEST OPERATION
- * SEE ATTACHED NWESP DETERMINATION LETTER
- * 50' & 200' QUINADONET RIVER BUFFERS MUST BE MARKED & INSPECTED BEFORE START OF HARVEST OPERATION.
- * NOTIFY DCR SERVICE FORESTER IF ADDITIONAL LANDING IS NEEDED

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	15.9	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	14.0
Hemlock		Black Oak	11.6
Spruce		White Oak	9.5
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	51.0
Beech		Cordwood (Cds)	210
White Birch		SW Pulp (Tons)	39
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	WO		
Acres	50.9	20.8		
Landowner Objective	LT	LT		
Designation of Trees	CT	n/a		
Type of Cut	SE	n/a		
Source of Regeneration	AD	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.

Kelley Fieda
 Signature of landowner(s)

10/31/2023
 Date

Service Forester

Determination and Status 34-41549-24

Final Report and Comments

Approved Disapproved Expires 10/31/25
 Cutting Plan
[Signature] 11/15/23
 Signature of Service Forester/Director's Agent Date

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

Extension 1 2 Expires / / Ser. For. Ints. / /
 Amendment App 1 Dis 1 App 2 Dis 2 / /

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	NT Non Corn Thin	PL Plant
RP Red Pine	<u>Landowner Objective</u>	SE Selection	CO Coppice
SR Red Spruce	LT Long-term Mgt.	SA Salvage	DS Direct Seed
	ST Short-term Har.	SN Sanitation	OT Other
			DL Diameter Limit*
			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

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: Holden

File Number: 134-41549-24

BMPs	<p><u>There are no Stream Crossings, Wetland Crossings or Harvesting in Wetland areas.</u></p> <p><u>No trees are being cut in FS-1.</u></p>
Silviculture	<p><u>In order to release advance regeneration, 13 openings in the overstory are being created, covering 17.1 acres. These openings range from 0.6 acre to 2 acres in size with an average of 1.3 acres. They are well distributed throughout the area taking advantage of the advance regeneration comprised of white pine, oaks, and other hardwoods.</u></p>
Object	<p><u>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.</u></p>
Other	<p><u>Haul roads have been flagged.</u></p> <p><u>The option to have multiple landings taking advantage of the existing forest road network will be made available depending upon which logger gets the lot. → NOTIFY DCR SERVICE FORESTER PRIOR</u></p> <p><u>No trees are being cut in ST-2.</u></p> <p><u>Trees are only being cut within the 13 overstory removal patches and of course, as needed at the landing and along haul roads.</u></p> <p><u>This area within the ALB regulated area. The logger will be required to be under a compliance agreement with the ALB Eradication Program. There are 21 cords of host material...all red maple.</u></p> <p><u>This entire sale area is covered by NHESP Priority Habitats of Rare Species polygon PH 1337.</u></p>

dcf



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

FILE # 134-41549-24

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/DWSP/OWM WEST BOYLSTON in accordance with the
(Name of Owner) (Address)

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

RIVER ST lot, HOLDEN (LOT 5306)

Approval Date 11/15/23

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. Maps of harvest area showing approximate boundary, proposed openings and other features

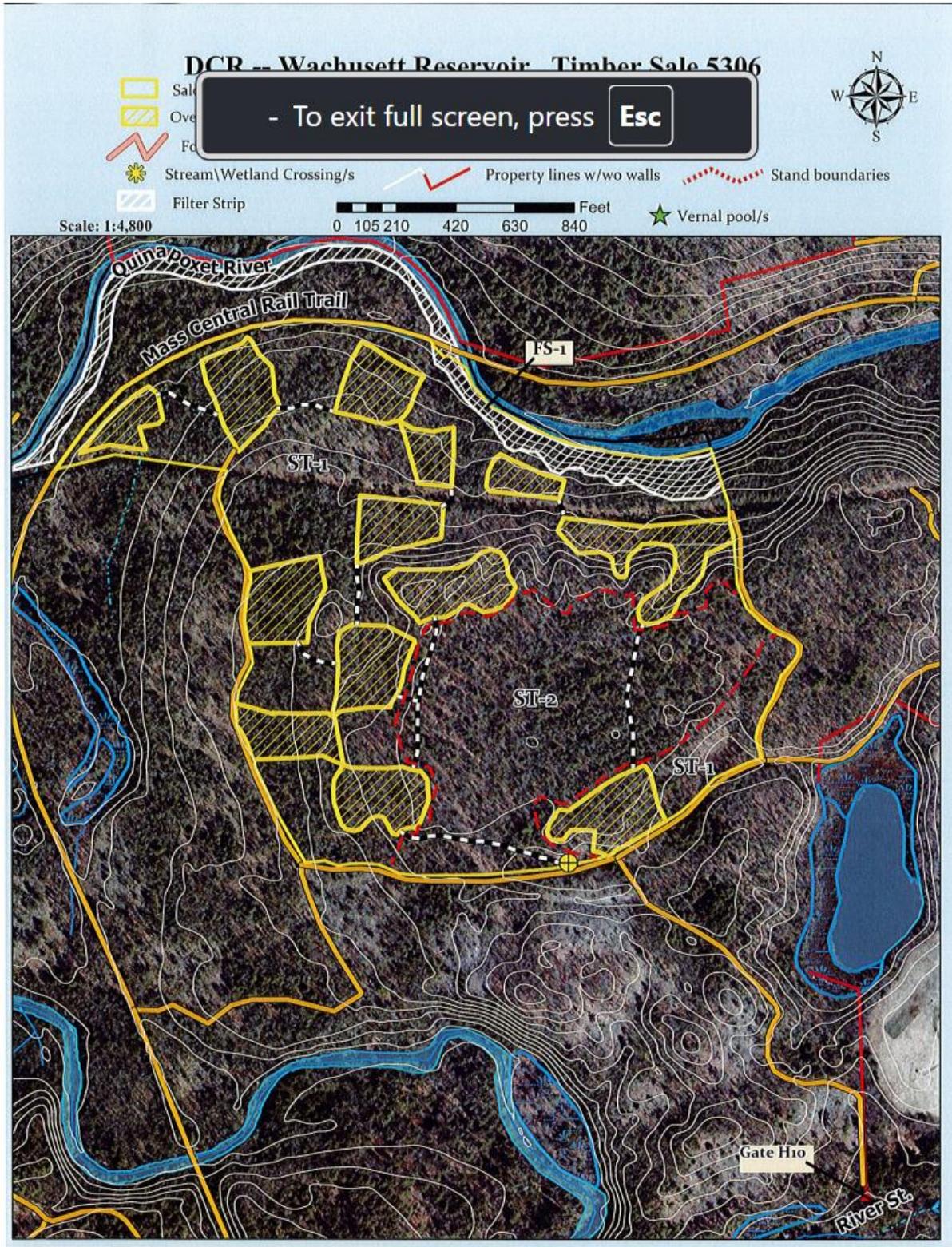


Figure 3. General locus map showing the location of the proposed timber harvest

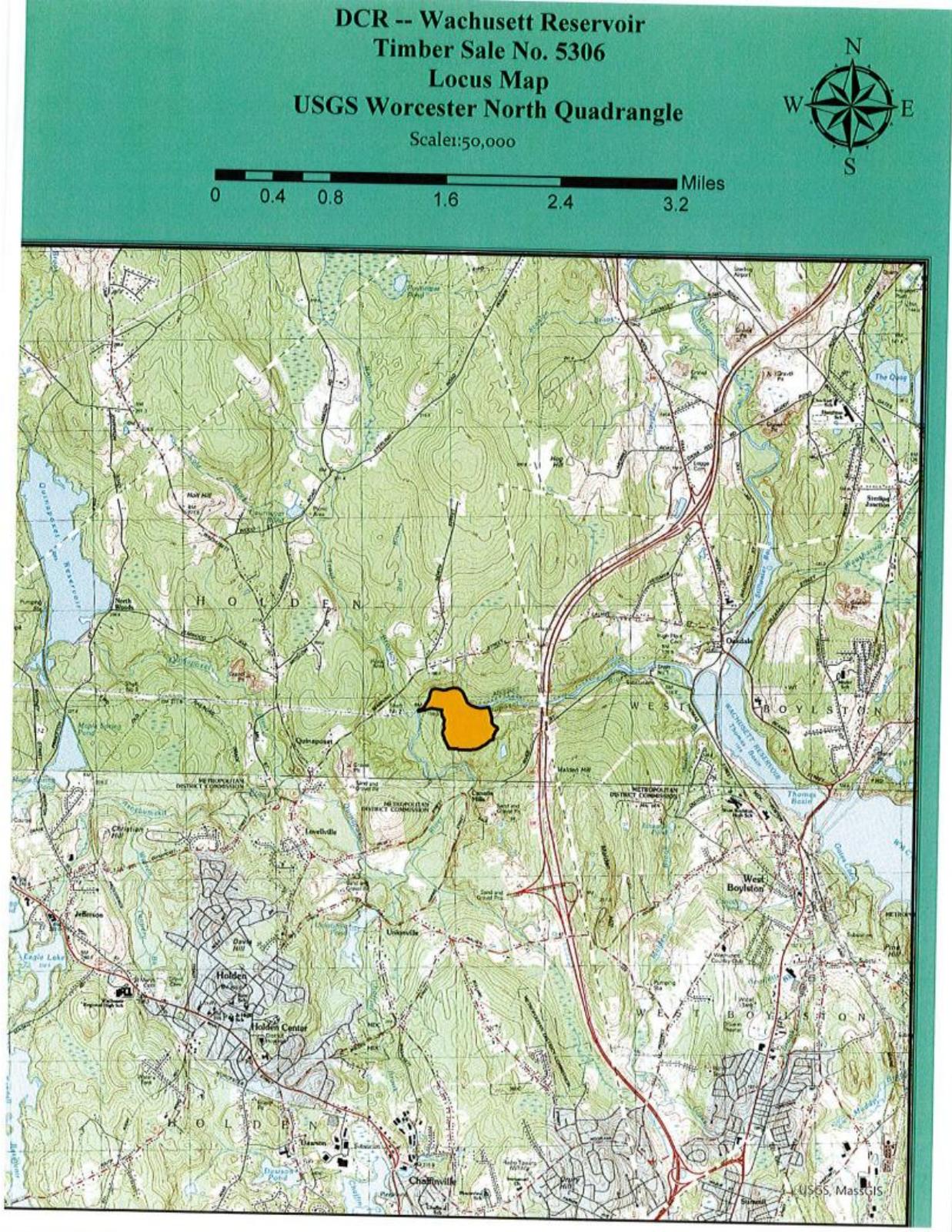


Figure 4. Pre-Harvest Photographs, A-B



A. The location of the main landing at the intersection of roads inside Gate H10.



B. The three white pines are being retained as a small group within this area of overstory removal.