

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

Project Title: Lot 5289

DWSP Harvest Permit Number: 5289

DWSP Proposal ID: WA-20-258

DCR Forest Cutting Plan File Number: 134-28893-20

Site Information

Watershed: Wachusett

Town(s): Holden

Acres: 72

Nearest Road: Princeton Street

Natural Heritage Atlas overlap?: Yes

Public Drinking Water Supply Watershed?: Yes

Forest Types: Mixed oak

Area of Critical Environmental Concern (ACEC)?: No

Soils: Hinckley and Merrimac fine sandy loam

Wetland Resources: Bear Swamp forms the western boundary of this area.

Vernal Pools: There is a verified vernal pool at the bottom of a steep-sided knoll in the eastern part of this area.

Harvest Information

Harvest Start Date: 9/9/2020

Harvest End Date: 12/15/2022

Number of Wetland Crossings: None

Number of Stream Crossings: None

Best Management Practices Applied

Stream Crossings: There are no stream crossings.

Filter Strips: There are no 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 number: 025

Phone number: 774-261-1841

Email: greg.buzzell@mass.gov

Narrative

General Description/Forest Composition/History

This is a typical dry-site mixed oak stand with black oak, red oak and white oak in the overstory along with far fewer red maple and white pine. Black oak predominates on the higher and drier portions with red oak taking its place on the lower, slightly damper sections. There is a light scattering of paper birch especially in the eastern half; perhaps a vestige of the fires that were probably more common when the railroad was active. There is a small pocket of large bigtooth aspen in the northeast corner of the area near the railroad bed which are nearing the end of their lifespan. Unexpectedly, there are two small red pine plantations. The northerly one dates to 1966. The other one was planted a little bit earlier in 1959. This one however is mostly blown over in what appears to have been a microburst in about 2010.

There is excellent advance regeneration through much of this area. Where there is not advance regeneration, mountain laurel is prevalent and at clearly interfering levels. This is especially so on the west slopes overlooking Bear Swamp. In the eastern part of the area, mountain laurel is also interfering along with witch-hazel in the lower, damper areas. Other common shrubs present are huckleberry, lowbush blueberry and sheep-laurel. Maple-leaved viburnum is present and seems to be well restricted to the Canton till soil in the southwestern part of this area as is sassafras.

The age structure of this working unit is as follows; 0%, 0-20 years old; 0% 21-40 years, 3%, 41-60 years; 0%, 61-80 years; 2%, 81-100 years; 95%, >100 years old. Most of this forest originated in about 1917. The oldest stands originated in about 1914, making them about 106 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 an excellent layer of young trees in this area, openings in the older forest will be made on 20 acres thereby achieving the goal of creating a new young forest on close to 1/3rd of this area. This will be accomplished by the removal of the older forest in 19 patches that average 1 acre with the largest of about 2 acres. These are well distributed throughout the proposed area taking advantage of where the regeneration is best. Given the dry character of this area, openings have been placed in order to take advantage of where white pine regeneration is present. Large trees are being retained in most of these openings that are larger than ½ acre both singly and in small clusters. These trees provide valuable structural diversity to these openings and it is expected that most of these retained trees will be allowed to grow indefinitely into the future. In this area, these retained trees are primarily white pines, which are better suited to growing and regenerating on this dry site. Active den/nest trees and exceptional individuals of all species present are being retained for habitat and/or diversity.

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.

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.

DWSP's Conservation Management Practices regarding vernal pools are being followed.

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 5. Post-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)

Site Information

Best Management Practices

Codes

For DCR Use Only:				
File Number	134-28893-20	Case No.		
Date Rec'd	6-30-00	Nat. Hert.	<input checked="" type="checkbox"/> YES / <input type="checkbox"/> YES	
Earliest Start	7-10-00	Nat. Hert. Imp.		
River Basin	NASHUA	Pub. Dr. Wat.	<input checked="" type="checkbox"/> WACHUSSETT	
Gen. Obj.	LT	ACEC	<input type="checkbox"/> NO	

Location		Landowner	
Town	Holden	Lot	5289
Road	Princeton Street		
Acres	72	Proposed Start Date	9/20
Vol. MBF	42.1	Vol. Cds.	369
Vol. Tons			

Plan Preparer		Licensed Timber Harvester**	
Name	Gregory S. Buzzell	Name	To be supplied when known.
Address	180 Beaman Rd.	Address	
Town, State, Zip	West Boylston, MA, 01583	Town, State, Zip	
Phone	774-261-1841	Phone	
Type of Preparer	Mass. Licensed Forester	Mass. Lic. Harvester #	
*Mass. Forester License # 25		**This information may be supplied after the plan is approved, but before work begins.	
*Required for land under Ch61, Ch61A or Forest Stewardship			

Stream Crossings		Harvesting in Wetlands	
Indicate location on map	SC-1	SC-2	SC-3
Type of Crossing			
Existing Structure			
Type of Bottom			
Bank Height (ft)			
Stabilization			

Wetland Crossings		Service Forester Comments	
Indicate location on map	WC-1	WC-2	WC-3
Length of Crossing			
Mitigation			
Stabilization			

Filter Strips		Service Forester Comments	
Indicate location on map	FS-1	FS-2	FS-3
Width (50', 100', or VA)	50'	50'	

Explain Visual Points

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	

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

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Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine		Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	30.0
Hemlock		Black Oak	11.7
Spruce		White Oak	0.4
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	42.1
Beech		Cordwood (Cds)	369
White Birch		SW Pulp (Tons)	
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	RP		
Acres	71	1		
Landowner Objective	LT	LT		
Designation of Trees	CT	OT		
Type of Cut	SH	n/a		
Source of Regeneration	AD	OT		

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

6/15/2020

Determination and Status 134-28893-20**Final Report and Comments**

Approved	Disapproved	Expires			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	6.30.2022			
Signature of Service Forester/Director's Agent		Date			
Extension	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Expires	Ser. For. Ints.	
Amendment	App 1 <input type="checkbox"/>	Dis 1 <input type="checkbox"/>	App 2 <input type="checkbox"/>	Dis 2 <input type="checkbox"/>	

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

Forest Types	HK	Hemlock	OM	Mixed Oak	CT	Cut Tree	SH	Shelterwood	Intermediate Harvests:	AD	Advanced	
WP White Pine	WP	WP/Hem	WK	WP/Hwdw	WH	WP/Oak	WO	WP/Birch	ST	Seed Tree	CT	Commercial Thin
WK WP/Hem	HH	Hem/Hdw	RM	Red Maple	BC	Black Cherry	BB	Bee/Bir/Map	LT	Leave Tree	CC	Clear Cut
WH WP/Hwdw	BC	Block Cherry	BE	Beech	SB	Stand Boundary	SF	Spruce/Fir	OT	Other	SE	Selection
WO WP/Oak	BB	Bee/Bir/Map	SF	Spruce/Fir	OT	Other					Non-Standard Systems: [*]	CO Coppice
RP Red Pine	OH	Oak/Hdw	SM	Sugar Maple	Landowner Objective				SA	Salvage	HG	Highgrade [*]
SR Red Spruce	OR	N Red Oak	PP	Pitch Pine	LT	Long-term Mgt			SN	Sanitation	DL	Diameter Limit [*]
					ST	Short-term Har.			OT	Other [*]	DS	Direct Seed

*If Other (OT) or a non-standard system is used an explanation must be given on attached narrative page

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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: 134-28893-20

BMPs	<p><u>Vernal pool BMPs will be followed.</u></p> <p><u>No trees are being cut within the NHESP Priority Habitat of Rare Species bubble that is associated with Asnebumskit Brook.</u></p>
Silviculture	<p><u>In order to release advance regeneration, 19 openings in the overstory are being created, covering 20.0 acres. These openings range from 0.5 to 2.0 acres in size with an average of 1.0 acre. They are well distributed throughout the sale area focusing on where the advance regeneration is well established.</u></p> <p><u>No trees are being cut in ST-2.</u></p>
Objectives	<p><u>The main 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>The forwarder haul roads have not been flagged so that either or both landings may be used. Existing roads and trails can be used.</u></p>



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

FILE # **134-28893-20**

FOREST CUTTING PLAN CERTIFICATE

MM

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

This certifies that **Dcre/DWSP/own** (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 **PRINCETON** lot.

LOT 5289

Approval Date **7-16-2020**

ISSUED BY:

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

Director's Agent **MICHAEL DOWNEY**
DCR Phone No. **978-368-0126**

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

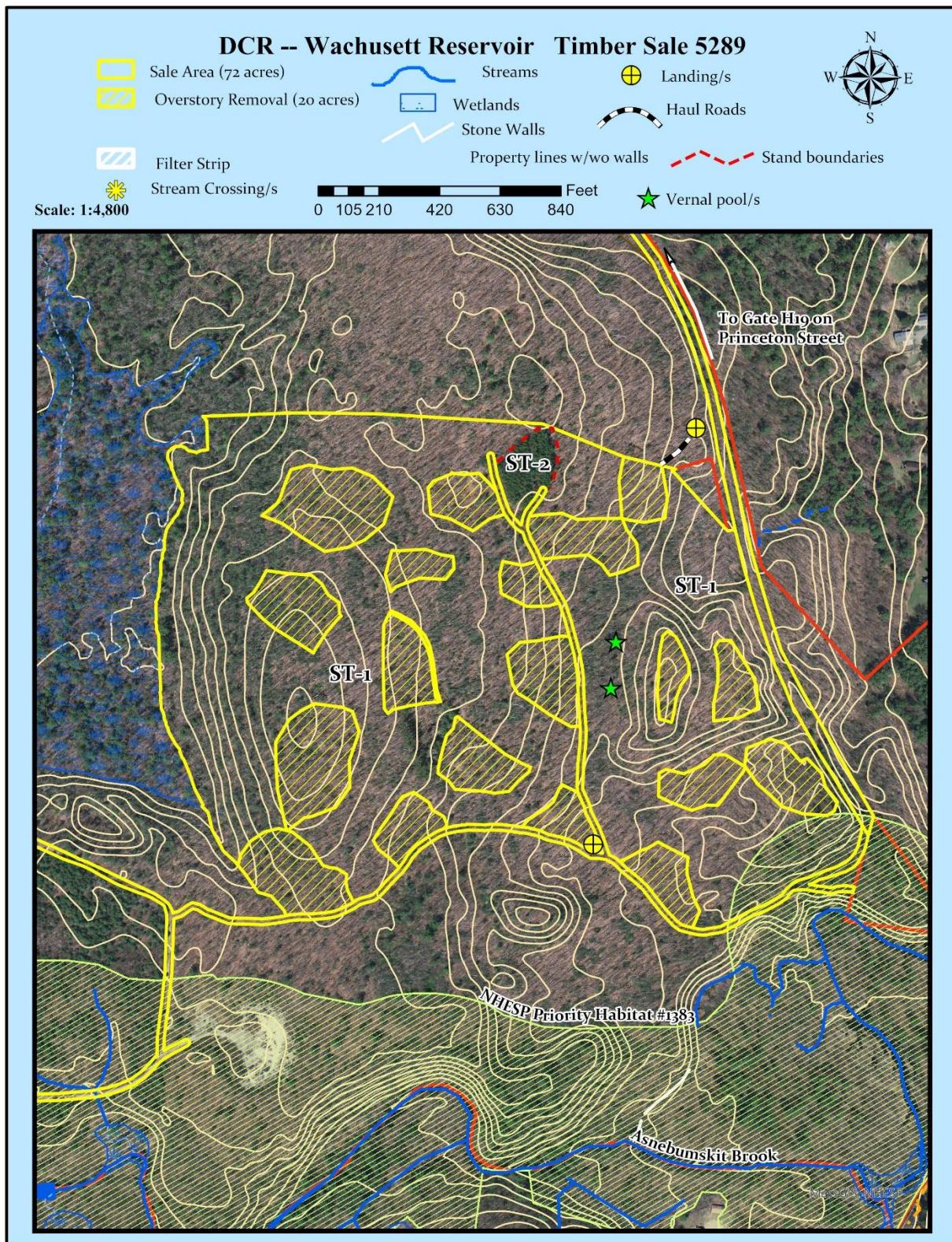


Figure 3. General locus map showing the location of the proposed timber harvest

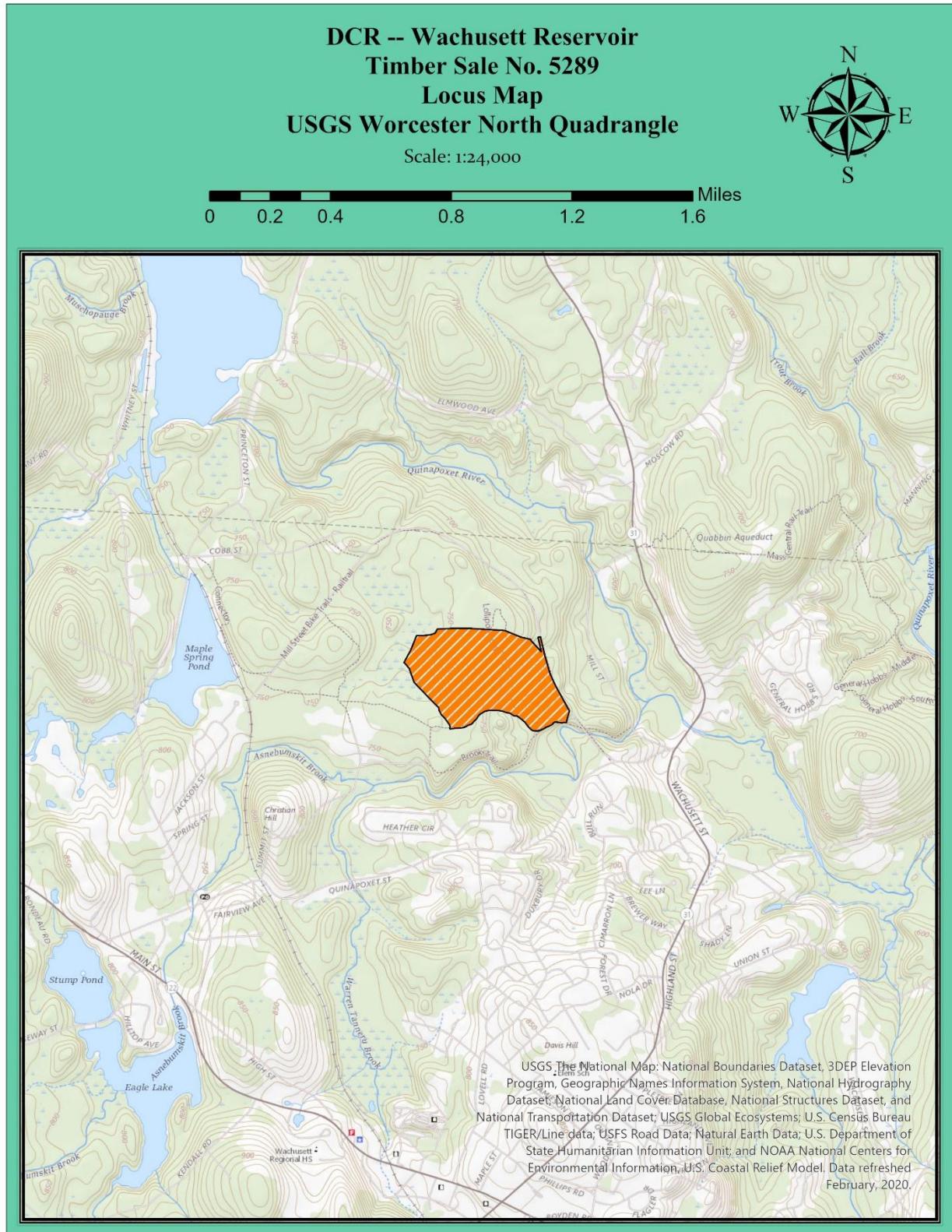


Figure 4. Pre-Harvest Photographs, A-B



A. Most of the trees in this area are being removed to make room for this excellent understory of young white pine and hardwood sapling.



B. The white pine in the foreground is being retained while the rest of the older trees are being removed to give the white pine and hardwood saplings the space and light they need to continue to thrive.

Figure 5. Post-Harvest Photographs, A-B



A. Opening with hardwood and pine regeneration released.



B. Opening completed with diverse regeneration released.