

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

Project Title: Lot 5284

DWSP Harvest Permit Number: 5284

DWSP Proposal ID: WA-18-211

DCR Forest Cutting Plan File Number: 282-22531-20

Site Information

Watershed: Wachusett

Town(s): Sterling

Acres: 65

Nearest Road: Justice Hill Road

Natural Heritage Atlas overlap?: No

Public Drinking Water Supply Watershed?: Yes

Forest Types: Northern red oak; white pine-oak

Area of Critical Environmental Concern (ACEC)?: No

Soils: The moderately well drained soil is the Woodbridge fine sandy loam, extremely stony on the east facing slope and is obviously associated with the red oak stand. The poorly drained Ridgebury fine sandy loam is in the low-lying area adjacent to Rocky Brook.

Wetland Resources: Stream and wetland resources will need to be crossed, and no harvesting will take place in wetlands.

Vernal Pools: There are two potential vernal pools.

Harvest Information

Harvest Start Date: 9/11/2019

Harvest End Date: 12/15/2021

Number of Wetland Crossings: One

Number of Stream Crossings: Two

Best Management Practices Applied

Stream Crossings: One stream crossing is rocky with short banks and will be bridge if it's flowing. The other crossing and an old farm crossing with stone abutments and it will be crossed with timber bridges also.

Filter Strips: There is no cutting in the filter strip.

Wetland Crossings: The existing stones on the approaches to the old farm stream crossing will be augmented with tree tops and corduroy.

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 working unit is part of two acquisitions by the MDC, one in 1995 (formerly Blanchard) and the other in 1996 (formerly Lanciani). The Blanchard property was logged sometime in the early 1990s. The mixed hardwood stand is located primarily in the low area adjacent to Rocky Brook which bisects this working unit. It is comprised primarily of red maple, yellow birch, red oak and hickory. Portions of this stand were cut pretty heavily in the early 1990s. It appears that better quality red oaks were the focus of that operation. The understory tree layer is comprised of varying levels of yellow birch, black birch, red maple, paper birch, red oak. Witch-hazel is the dominant shrub. Grape and ferns (cinnamon and interrupted) are also common.

The red oak stand on the east-facing slope also has white oak, white pine and hickory present in the overstory. The nearly 90-year-old red oaks are of very good quality and are primarily single-stemmed. The understory tree layer is comprised of black birch, hickory, red maple, red oak, white oak and black cherry. Maple-leaved viburnum (a good sign from the point of view of deer population) and hay-scented fern are the most common non-tree species in the understory. Most of the white pine/oak stands are on the former Lanciani parcel in the east end of this working unit. Along with white pine, the most common species are red oak, red maple, black birch, and white ash. The understory has very little white pine and is instead dominated by black birch, red oak, paper birch, red maple and white oak. Witch-hazel, mountain laurel and blueberry (both highbush and lowbush) are the dominant shrubs.

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

Given the excellent advance regeneration present, openings will be made to release this regeneration resulting in a new age cohort. To that end, 12 openings have been marked, distributed throughout the area taking advantage of where the advance regeneration is best. These openings total 12.2 acres and range in size from 0.4 to 1.75 acres in size with an average size of 1.0 acre. As a result of this operation the age structure of this working unit will be one step closer to our ultimate goal of having at least 3 distinct age cohorts within each of our working units. The species composition of this new cohort should be more diverse than the overstory particularly in the case of the red oak stand which is presently roughly 80-90% red oak. Openings in this stand will have a far more diverse mix of black birch, hickory, red oak, red maple, white oak and black cherry.

Cultural Resources

There are no known historic and archaeological resources associated with this site. If any features are uncovered before or during the harvest, they will be protected according to guidelines set forth in the Comprehensive Land Management Plan.

Rare or Endangered Species

None known.

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)

NOV 08 2019

For DCR Use Only:

File Number 23-22531-200 Case No. ✓
Date Rec'd 11-8-19 Nat. Hert. NO
Earliest Start 11-26-19 Nat. Hert. Imp. NO
River Basin NASHUA Pub. Dr. Wat. WACHUSETT
Gen. Obj. LT ACEC NO

Site Information

Location

Town Sterling Lot 5284
Road Justice Hill Road
Acres 65 Proposed Start Date 11/16/19
Vol. MBF 168.5 Vol. Cds. 158 Vol. Tons 42

Plan Preparer

Name Russell Wilmot
Address 180 Beaman St.
Town, State, Zip West Boylston, MA, 01583
Phone 774-261-1840
Type of Preparer Mass. Licensed Forester
*Mass. Forester License # 426
*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 774-261-1840
Ch61 ☐ Ch61A ☐ Stew ☐ *Case #
Est. Stumpage Value

Licensed Timber Harvester**

Name Will be provided 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	PO	BR		
Existing Structure	NO	NO		
Type of Bottom	ST	ST		
Bank Height (ft)	<1'	>2'		
Stabilization	CO	CO		

Wetland Crossings

Indicate location on map	WC-1	WC-2	WC-3	WC-4
Length of Crossing	~20'			
Mitigation	DR			
Stabilization	CO			

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

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

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	104.5	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	48.3
Hemlock		Black Oak	8.5
Spruce		White Oak	7.2
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	168.5
Beech		Cordwood (Cds)	158
White Birch		SW Pulp (Tons)	42
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.

Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	WO	RO	MH	OH
Acres	21	14	14	16
Landowner Objective	LT	LT	LT	LT
Designation of Trees	CT	CT	CT	CT
Type of Cut	SH	SH	SH	SH
Source of Regeneration	AD/SE	AD/SE	AD/SE	AD/SE

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

Determination and Status *282-22531-20*

Approved	Disapproved	Expires
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>11-8-2021</u>
Signature of Service Forester/Director's Agent		Date
<u>[Signature]</u>		<u>11-18-2019</u>
Extension	1 <input type="checkbox"/> 2 <input type="checkbox"/>	Expires
Amendment	App 1 <input type="checkbox"/> Dis 1 <input type="checkbox"/> App 2 <input type="checkbox"/> Dis 2 <input type="checkbox"/>	Ser. For. Ints.

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

Forest Types				Designation of Trees	Type of Cut	Intermediate Harvests:	Source of Regeneration
WP White Pine	HK Hemlock	OM Mixed Oak	CT Cut Tree	SH Shelterwood	CT Commercial Thin	AD Advanced	
WK WP/Hem	HH Hem/Hdwd	RM Red Maple	LT Leave Tree	ST Seed Tree	NT Non Com Thin	SE Natural Seed	
WH WP/Hdwd	BC Black Cherry	BE Beech	SB Stand Boundary	CC Clear Cut		PL Plant	
WO WP/Oak	BB Bee/Bir/Map	SF Spruce/Fir	OT Other	SE Selection		CO Coppice	
RP Red Pine	OH Oak/Hdwd	SM Sugar Maple	<u>Landowner Objective</u>	SA Salvage		DS Direct Seed	
SR Red Spruce	OR N Red Oak	PP Pitch Pine	LT Long-term Mgt.	SN Sanitation		OT Other	
			ST Short-term Har.				

*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: Stirling

File Number: 282-22531-20

B M P s	<p><u>There are two stream crossings. SC-1 has short bank heights and is rocky. SC-1 will be poled if dry and bridged if flowing.</u></p> <p><u>SC-2 / WC-1 is an old stone crossing with stone abutments.</u> <u>A timber bridge will be placed on top for crossing. The actual wetland area being crossed is short because of the existing stone crossing. Both crossings approaches will be armored with poles and tops.</u></p> <p><u>This site will be forwarded in a (more likely) dry or (less likely) frozen state.</u></p> <p><u>Forwarder trails are flagged.</u></p> <p><u>There is one landing located at gate S36 next to the powerline.</u></p>
Silviculture	<p><u>In order to release advance regeneration 12 openings in the overstory are being created, covering 12.2 acres. These openings range from a 0.4 acre to 1.8 acres in size with an average of 1 acre. They are well distributed throughout the area taking advantage of the advance regeneration comprised of oaks, maples, birches, white pine and other hardwoods. No thinning will occur between any of these openings.</u></p>
Objectives	<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>The Natural Heritage GIS layer does not come into this sale area.</u></p> <p><u>The unregulated stream will be treated in a similar fashion as SC-1 with poles and tops being used.</u></p>



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

FILE # **282-22531-20**

FOREST CUTTING PLAN CERTIFICATE

V

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

This certifies that **Deirdre Plowm** (Name of Owner) **W. 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

JUSTICE lot
LOT 5284

Approval Date **11-18-2019**

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

ISSUED BY: 
Priscilla E. Ceigis, Director
Division of State Parks and Recreation

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

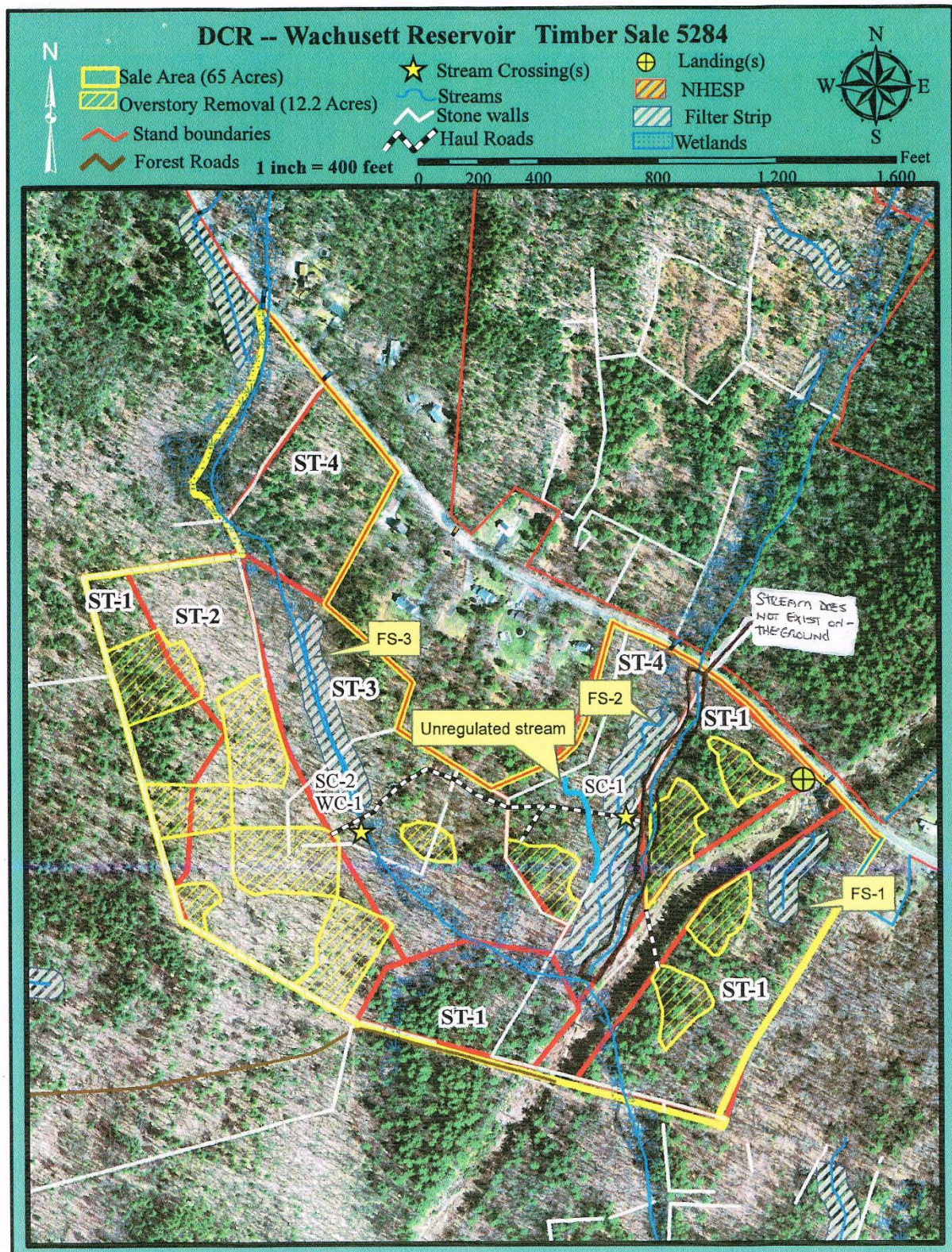


Figure 3. General locus map showing the location of the proposed timber harvest

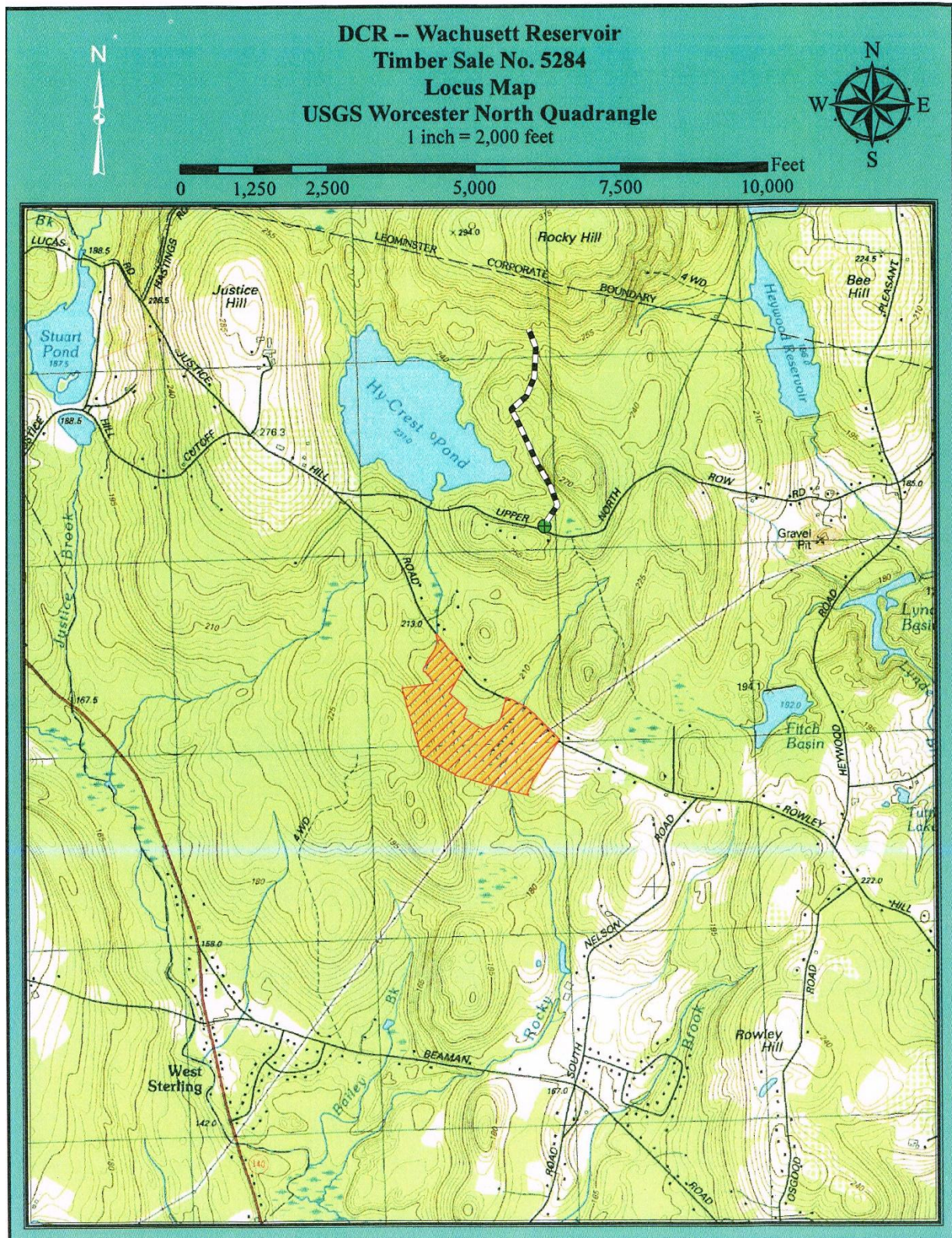


Figure 4. Pre-Harvest Photographs, A-B



A. Landing location on Justice Hill Road in Sterling.



B. An area where the overstory is being removed to release the young seedlings and saplings.

Figure 5. Post-Harvest Photographs, A-B



A. Large red oak retention with diverse hardwood regeneration in the understory.



B. Mixed oak and maple retention with diverse hardwood regeneration in the understory.