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: Lot 5263
DCR Forest Cutting Plan File Number: 134-8317-17

Site Information

Watershed:Wachusett	**Town(s)**: **Holden**
Acres: 40.6	**Nearest Road: Elmwood Ave.**
Natural Heritage Atlas overlap?: No	**Public Drinking Water Supply Watershed?:** Yes
Forest Types:White pine-Hardwood & Mixed Hardwood	**ACEC?: No**
Soils: Paxton fine sandy loam, extremely stony.	
Wetland Resources: A small stream forms the eastern boundary of this sale area.	
Vernal Pools: None present.	

Harvest Information

DWSP Permit Start Date: 11/30/17	**DWSP Permit End Date: 12/07/18**
Number of Wetland Crossings: 0	**Number of Stream Crossings: 1**

Best Management Practices Applied

Stream Crossings	The stream will be crossed at an old stone bridge. Additional material, either wood, stone or steel plates will be needed to level the crossing.
Filter Strips	There are no trees marked within the filter strip.
Wetland Crossings	There are no wetland crossings.
Harvesting in Wetlands	No harvesting in wetlands will occur.

DWSP Forester supervising this harvest
Name: Greg Buzzell
Forester License #: 025
Phone #: 508-792-7806 x317

NARRATIVES

General Description/Forest Composition/History:

This area was acquired in 1989 as part of a 124 acre purchase. This a diverse forest comprised primarily of white pine, red maple and hickory along with white oak, black birch, white ash, yellow birch, black cherry, red oak, bigtooth aspen and sugar maple. This property was harvested in the 1980s prior to MDC acquisition, which, in part, accounts for a decent understory of saplings but also for a significant number of basal wounds on the remaining overstory trees. Such wounds are all too common in lots that were carelessly harvested using skidders. The understory is as diverse in species as the overstory, especially in the eastern part of the area with red oak more common in the understory than it is in the overstory. In the western part, black birch is the most common sapling species along with yellow birch, white oak and all the rest. Where regeneration is lacking, interfering levels of mountain laurel and witch-hazel are present.

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.

This area was selected for management because of the lack of age diversity both in these 40 acres as well as the 2,405 acres that the DCR owns that flow into the Quinapoxet River. This operation will contribute a little over 8 acres of additional young forest towards the goal of having 3 age classes of forest well distributed throughout this forest.

Silvicultural Objectives:

Openings will be made in the overstory taking advantage of areas of good advance regeneration thereby releasing these younger trees from the shade of the older, taller forest. Eleven openings will be made that range in size from about 1/4 to 1.8 acres in size. These openings total 8.2 acres which represents 20% of the manageable acreage in this area. A few mature trees will be retained within each of these openings, particularly the ones larger than ½ acre. These trees provided important structural diversity within these patches of young trees in the short term and especially in the long term as it is anticipated that these retained trees will never be cut but be allowed to live to their natural lifespan.

Cultural Resources:

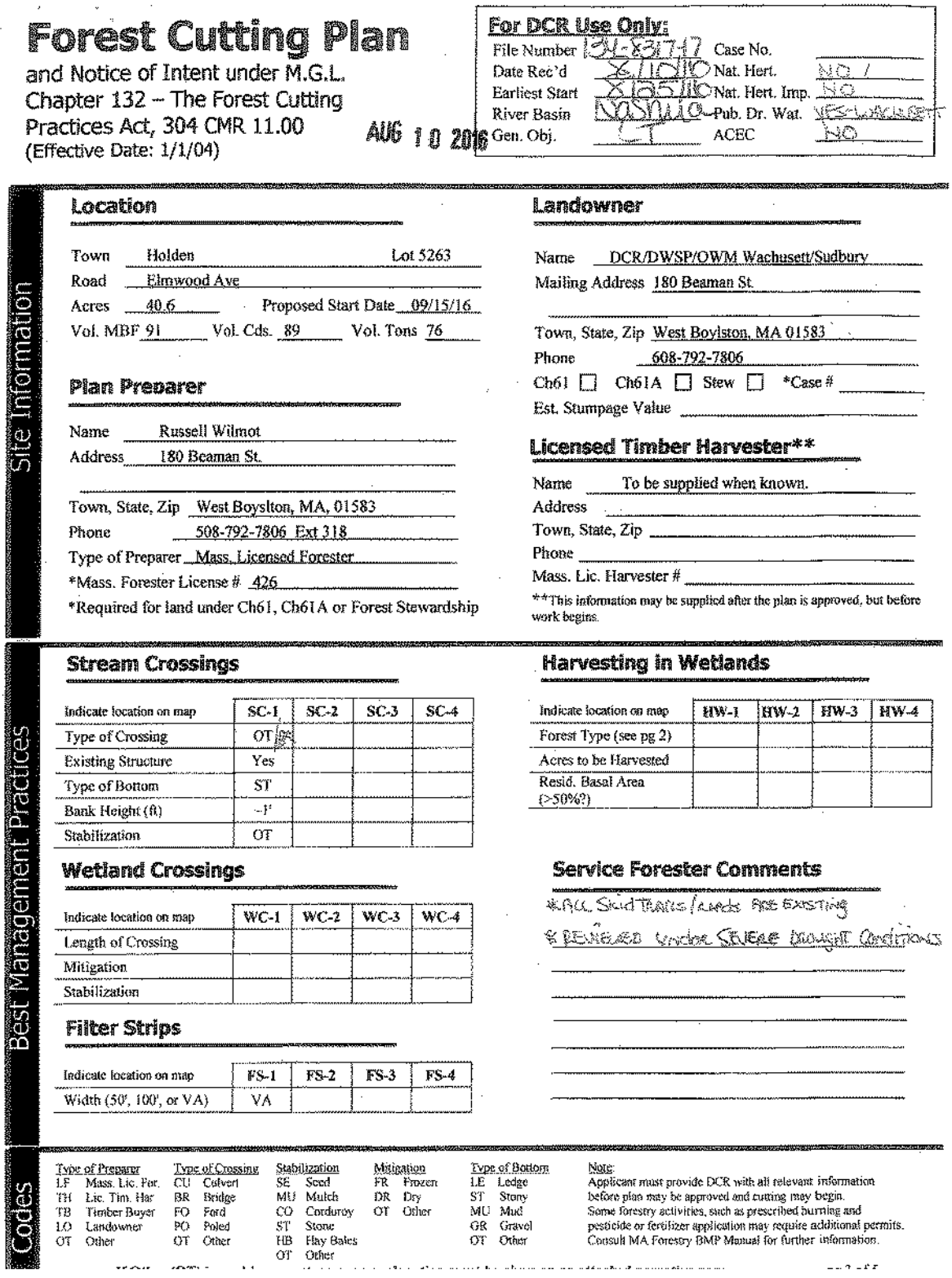
There are no known or documented significant historic or archeological resources in this area. According to models that predict the likelihood of the past use of a site by Native Americans, this area ranks as “Not Sensitive”. Appropriate care will be taken to protect the stone walls in this area.

Wildlife/Rare or Endangered Species:

There are no critical habitats or known rare or endangered plants or wildlife. All Best Management Practices regarding the retention of snag trees, trees with cavities and other valuable wildlife habitat features will be employed.

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)

AUG 10 2016

For DCR Use Only:

File Number	134-83747	Case No.	
Date Rec'd	8/10/16	Nat. Hert.	NO /
Earliest Start	8/25/16	Nat. Hert. Imp.	NO
River Basin	NASHUA	Pub. Dr. Wat.	WES-LOWER SUB
Gen. Obj.	CT	ACEC	NO

Site Information

Location

Town Holden Lot 5263
Road Elmwood Ave
Acres 40.6 Proposed Start Date 09/15/16
Vol. MBF 91 Vol. Cds. 89 Vol. Tons 76

Plan Preparer

Name Russell Wilmot
Address 180 Beaman St.
Town, State, Zip West Boylston, MA, 01583
Phone 508-792-7806 Ext 318
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 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	OT			
Existing Structure	Yes			
Type of Bottom	ST			
Bank Height (ft)	~1'			
Stabilization	OT			

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

*ALL Skid Trails/Lands ARE EXISTING
& RENEWED Under SNOW/Drought Conditions

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.

Forest Products

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	82.3	Red Maple	3.8
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	2.4
Hemlock		Black Oak	0.8
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	0.5
White Ash		**Total Mbf**	91
Beech		**Cordwood (Cds)**	89
White Birch		**SW Pulp (Tons)**	76
B & Y Birch	1.2	**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	MH	WH		
Acres	18	22		
Landowner Objective	LT	LT		
Designation of Trees	CT	CT		
Type of Cut	SH	SH		
Source of Regeneration	AD/SE	AD/SE		

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: 8/16/16

Service Forester

Determination and Status

	Approved	Disapproved	Expires
Cutting Plan	☒	☐	8-10-2018

Signature of Service Forester/Director's Agent — Date: 8-18-2016

			Expires	Ser. For. Init.
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 Black 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

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: 134-8312-17

BMPs	There is one stream crossing. It is an existing stone bridge. This bridge will need to be built up with either some wood/stones or a steel plate in one section to level it out. Both approaches to the stream crossing slope down to the stream over a long distance. To address this a couple switchbacks will be used on the haul road in conjunction with water bars and both approaches will be armored with wood. There is a filter strip that follows the stream that makes up the eastern boundary of the sale.
Silviculture	In order to release advance regeneration, 11 openings in the overstory are being created, covering 8.21 acres. These openings range from 0.28 acres to 1.84 acres in size with an average of .75 acres. They are well distributed throughout the sale area.
Objectives	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.
Other	With the landing on Elmwood Ave it is a half mile to the stream crossing which accesses the sale area. The haul road for the first section is a preexisting haul road and then skirts around several previous openings from another sale and then down to the stream crossing. The entire length has been heavily flagged.

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

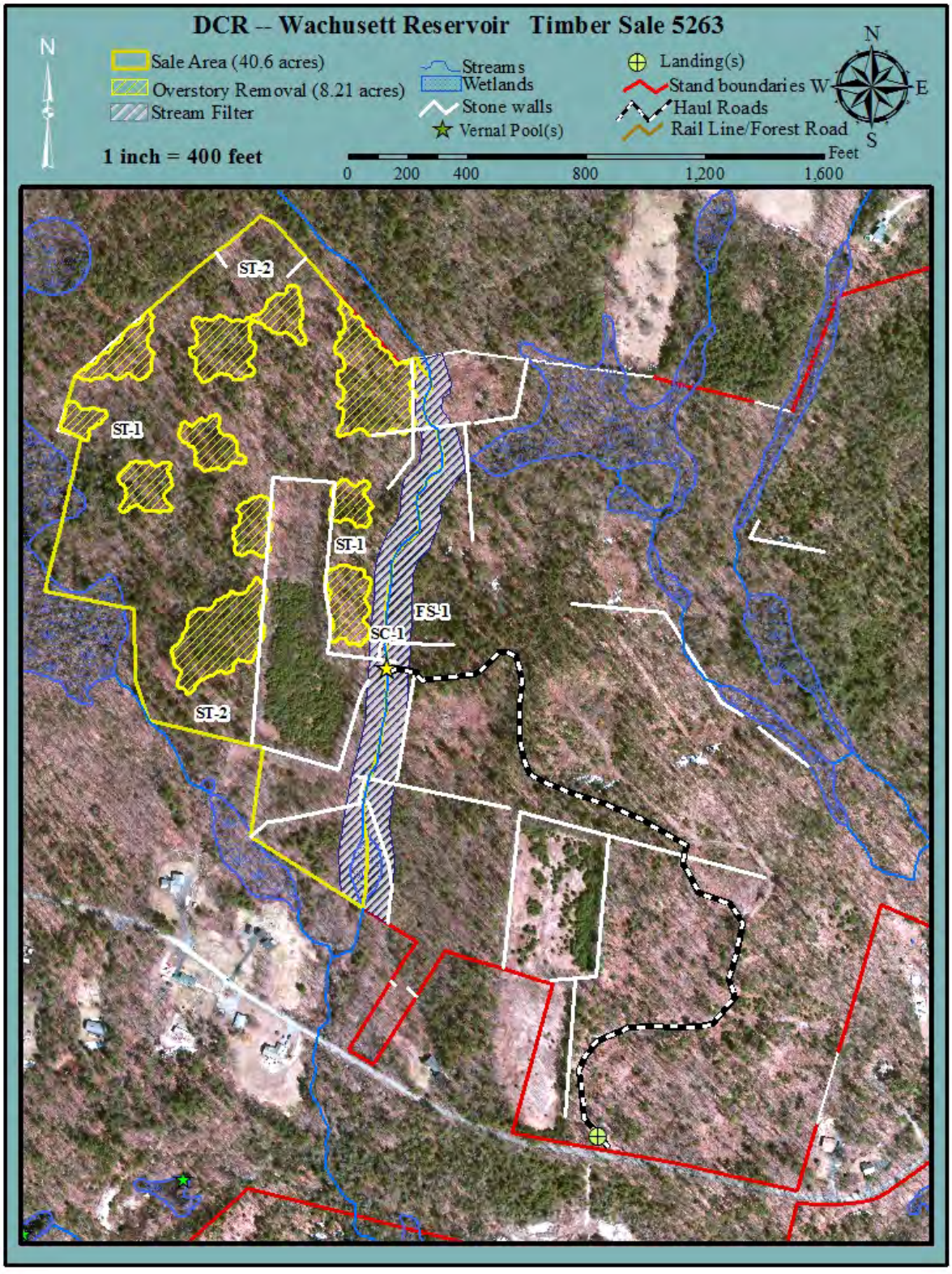


Figure 3. General locus map showing the location of the proposed timber harvest

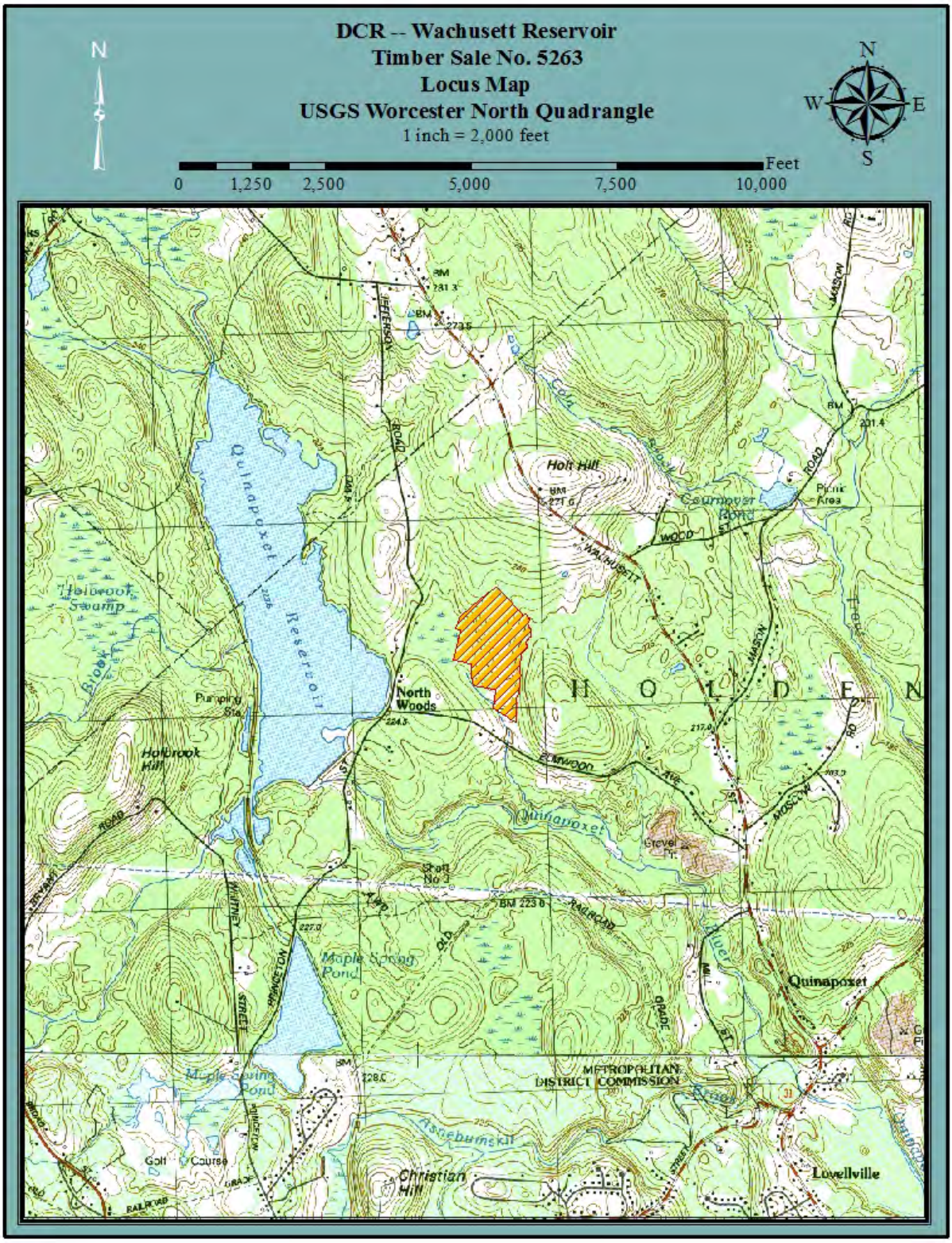


Figure 4. Pre-Harvest Photographs, A-D

A. Landing location on Elmwood Ave. in Holden.

B. This is the stone bridge which will be used to cross the stream and access the sale area.

C. An area of overstory removal to release the young trees beneath. The large red oak in the foreground is being retained to provide a range of important ecological values.

D. The older trees are being removed in this area to allow the young pines and hardwoods the sun and space they need to grow.

Figure 5. Post-Harvest Photographs, A-C

A. Oak stand removed with a more diverse regeneration released.

B. White pine stand removed with bigtooth aspen, oak, and yellow birch retention over a diverse mix of regeneration.

C. White pine stand removed with a hardwood/softwood mix of regeneration released.