

**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: 5305

DWSP Proposal ID: WA-22-115

DCR Forest Cutting Plan File Number: 039-36235-23

Site Information

Watershed: Wachusett

Town(s): Boylston

Acres: 42.7

Nearest Road: Main St. (Rt. 70)

Natural Heritage Atlas overlap?: No

Public Drinking Water Supply Watershed?: Yes

Forest Types: White pine/oak; Mixed oak; white pine

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: Not applicable

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

All of this area is original watershed property that was taken from Levi Flagg and several smaller landowners on July 23, 1900 at the time when the Wachusett Dam was being built. Prior to the taking, an old highway ran through the southern portion of this working unit and was decommissioned in 1860. Today, the highway is still noted by the stonewall that ran along it. In 1905 the roadside of Route 70 was planted/improved. The map of the 1938 hurricane shows a scattering of damage in the area. In 1939 the MDC cleared 100% of the route 70 road frontage. The first timber harvest was in 1982 when a thinning occurred in the southern portion of the area. Then, in 1983, 24 acres were thinned in the northern section. In 1984 the Route 70 roadside was thinned. In 1995, a small thinning occurred in the working unit. The last time this lot was worked was a salvage that occurred along Route 70 in 2005 which resulted in a new young stand.

All of those harvests have resulted in thick regeneration throughout the working unit. The current forest structure is dominated by white pine, red oak, black oak, white oak, red maple, American beech and paper birch. The pine is of better health and vigor than the hardwoods currently. There is evidence of past pine cutting throughout the unit and some hardwoods. The most recent spongy moth infestation that peaked in 2019 resulted in scattered death of oaks in the overstory. Regeneration is uniformly good with some small pockets of heavy mountain laurel in the northern area. There is also some low bush blueberry and sheep laurel mixed in the understory. The area is fairly flat with some scattered small kettle bowls.

A section of this unit was also part of a Clark University professors research project with the numbered aluminum tree tags still remaining in the field. The working unit falls within the Asian Longhorned Beetle Quarantine zone. There is a very small amount of host material within the working unit. With the recent deer hunts, there is now little current deer browse evident.

The age structure of the working unit is as follows: 4% 0-20 years old, 0% 21-40 years old, 0% 41-60 years old, 0% 61-80 years old, 66% 81-100 years old, 30% >100 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

Regeneration sampling found adequate regeneration present in 85% of the plots, with marginal regeneration in another 10% of the plots. Oak was present in 83% of the plots. The advance regeneration is comprised of red oak, black oak, white oak, white pine, red maple, black birch, hickory and beech.

With such good amounts of advance regeneration present throughout the working unit, openings will be made on 14.2 acres which achieves the goal of creating a new age class on about 1/3 of the working unit. This will be done by the removal of the overstory in patches that average 1.2 acres in size and range in size from 0.25 to 2 acres. The openings are well distributed throughout the working unit taking advantage of the best advance regeneration within the unit.

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 operation was reviewed by the DCR Archeologist. No known or significant historic or archeological resources are currently documented in the project parcel. Any cultural resource features located before or during the forestry project will be protected according to guidelines set forth in the current DWSP's Land Management Program and indicated on harvest maps accordingly.

Rare or Endangered Species

None known. However, Northern goshawks have been observed in this area over the years including as recently as 2019. While the specific tree that the goshawks were nesting in in 2019 was not identified, during the marking of this lot, several trees with stick nests were noted. The locations of these trees have been mapped and were specifically protected during marking and will continue to be observed and protected during the harvest operation.

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-C

Figure 5. Post-Harvest Photographs, A-B

Figure 1. Forest Cutting Plan

<h2 style="margin: 0;">Forest Cutting Plan</h2> <p style="margin: 0;">and Notice of Intent under M.G.L. Chapter 132 – The Forest Cutting Practices Act, 304 CMR 11.00 (Effective Date: 1/1/04)</p>		For DCR Use Only: File Number <u>039-36235-23</u> Case No. _____ Date Rec'd <u>1-13-23</u> Nat. Hert. <u>1 Y</u> Earliest Start <u>1-30-23</u> Nat. Hert. Imp. <u>N</u> River Basin <u>NASHUA</u> Pub. Dr. Wat. <u>WACHUSETT</u> Gen. Obj. <u>LT</u> ACEC <u>N</u>																																																		
Site Information	Location Town <u>Boylston</u> Lot <u>5305</u> Road <u>Main St. (Rt 70)</u> Acres <u>41</u> Proposed Start Date <u>3/23</u> Vol. MBF <u>179</u> Vol. Cds. <u>67</u> Vol. Tons <u>148</u>	Landowner Name <u>DCR/DWSP/OWM Wachusett/Sudbury</u> Mailing Address <u>180 Beaman St.</u> Town, State, Zip <u>West Boylston, MA 01583</u> Phone <u>608-792-7806</u> Ch61 <input type="checkbox"/> Ch61A <input type="checkbox"/> Stew <input type="checkbox"/> *Case # _____ Est. Stumpage Value _____																																																		
	Plan Preparer Name <u>Gregory S. Buzzell</u> Address <u>180 Beaman Rd.</u> Town, State, Zip <u>West Boylston, MA, 01583</u> Phone <u>774-261-1841</u> Type of Preparer <u>Mass. Licensed Forester</u> *Mass. Forester License # <u>25</u> *Required for land under Ch61, Ch61A or Forest Stewardship	Licensed Timber Harvester** Name <u>To be supplied when known.</u> Address _____ Town, State, Zip _____ Phone _____ Mass. Lic. Harvester # _____ **This information may be supplied after the plan is approved, but before work begins.																																																		
	Stream Crossings <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="text-align: left;">Indicate location on map</th> <th>SC-1</th> <th>SC-2</th> <th>SC-3</th> <th>SC-4</th> </tr> </thead> <tbody> <tr><td>Type of Crossing</td><td></td><td></td><td></td><td></td></tr> <tr><td>Existing Structure</td><td></td><td></td><td></td><td></td></tr> <tr><td>Type of Bottom</td><td></td><td></td><td></td><td></td></tr> <tr><td>Bank Height (ft)</td><td></td><td></td><td></td><td></td></tr> <tr><td>Stabilization</td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	Indicate location on map	SC-1	SC-2	SC-3	SC-4	Type of Crossing					Existing Structure					Type of Bottom					Bank Height (ft)					Stabilization					Harvesting in Wetlands <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="text-align: left;">Indicate location on map</th> <th>HW-1</th> <th>HW-2</th> <th>HW-3</th> <th>HW-4</th> </tr> </thead> <tbody> <tr><td>Forest Type (see pg 2)</td><td></td><td></td><td></td><td></td></tr> <tr><td>Acres to be Harvested</td><td></td><td></td><td></td><td></td></tr> <tr><td>Resid. Basal Area (>50%)</td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	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%)				
	Indicate location on map	SC-1	SC-2	SC-3	SC-4																																															
	Type of Crossing																																																			
	Existing Structure																																																			
	Type of Bottom																																																			
	Bank Height (ft)																																																			
	Stabilization																																																			
	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%)																																																				
Wetland Crossings <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="text-align: left;">Indicate location on map</th> <th>WC-1</th> <th>WC-2</th> <th>WC-3</th> <th>WC-4</th> </tr> </thead> <tbody> <tr><td>Length of Crossing</td><td></td><td></td><td></td><td></td></tr> <tr><td>Mitigation</td><td></td><td></td><td></td><td></td></tr> <tr><td>Stabilization</td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	Indicate location on map	WC-1	WC-2	WC-3	WC-4	Length of Crossing					Mitigation					Stabilization					Service Forester Comments <u>• PLEASE NOTIFY DCR SERVICE FORESTER AT START OF HARVEST OPERATION</u> <u>• NHESP DETERMINATION LETTER ATTACHED</u> _____ _____ _____																															
Indicate location on map	WC-1	WC-2	WC-3	WC-4																																																
Length of Crossing																																																				
Mitigation																																																				
Stabilization																																																				
Filter Strips <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="text-align: left;">Indicate location on map</th> <th>FS-1</th> <th>FS-2</th> <th>FS-3</th> <th>FS-4</th> </tr> </thead> <tbody> <tr><td>Width (50', 100', or VA)</td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	Indicate location on map	FS-1	FS-2	FS-3	FS-4	Width (50', 100', or VA)																																														
Indicate location on map	FS-1	FS-2	FS-3	FS-4																																																
Width (50', 100', or VA)																																																				
Best Management Practices	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="text-align: left;">Type of Preparer</th> <th style="text-align: left;">Type of Crossing</th> <th style="text-align: left;">Stabilization</th> <th style="text-align: left;">Mitigation</th> <th style="text-align: left;">Type of Bottom</th> <th style="text-align: left;">Note:</th> </tr> </thead> <tbody> <tr> <td>LF Mass. Lic. For.</td> <td>CU Culvert</td> <td>SE Seed</td> <td>FR Frozen</td> <td>LE Ledge</td> <td rowspan="5"> 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. </td> </tr> <tr> <td>TH Lic. Tim. Har</td> <td>BR Bridge</td> <td>MU Mulch</td> <td>DR Dry</td> <td>ST Stony</td> </tr> <tr> <td>TB Timber Buyer</td> <td>FO Ford</td> <td>CO Corduroy</td> <td>OT Other</td> <td>MU Mud</td> </tr> <tr> <td>LO Landowner</td> <td>PO Poled</td> <td>ST Stone</td> <td></td> <td>GR Gravel</td> </tr> <tr> <td>OT Other</td> <td>OT Other</td> <td>HB Hay Bales</td> <td></td> <td>OT Other</td> </tr> </tbody> </table>		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. Some forestry activities, such as prescribed burning and pesticide or fertilizer application may require additional permits. Consult MA Forestry BMP Manual for further information.	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																		
	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. Some forestry activities, such as prescribed burning and pesticide or fertilizer application may require additional permits. Consult MA Forestry BMP Manual for further information.																																															
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																																																
<p>If Other (OT) is used in any category an explanation must be given on an attached narrative page</p>																																																				

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	173.4	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	0.9
Hemlock		Black Oak	3.6
Spruce		White Oak	1.0
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	179.0
Beech		Cordwood (Cds)	67
White Birch		SW Pulp (Tons)	148
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	MO	WP	MH
Acres	28.1	9.5	3.4	1.8
Landowner Objective	LT	LT	LT	LT
Designation of Trees	CT	CT	CT	OT
Type of Cut	SH	SH	SH	n/a
Source of Regeneration	AD	AD	AD	n/a

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 Frieda

Signature of landowner(s)

1/10/2023

Date

Determination and Status 039-36235-23

Final Report and Comments

Approved Disapproved Expires

Cutting Plan



1/13/25

Signature of Service Forester/Director's Agent

Date

1/27/23

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

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	SE Natural Seed
WK WP/Hem	HH Hem/Hdwd	RM Red Maple	LT Leave Tree	ST Seed Tree	NT Non Com Thin	PL Plant	CO Coppice
WH WP/Hdwd	BC Blck Cherry	BE Beech	SB Stand Boundary	CC Clear Cut	SE Selection	HG Highgrade*	DS Direct Seed
WO WP/Oak	BB Bee/Bir/Map	SF Spruce/Fir	OT Other	SA Salvage	DL Diameter Limit*	OT Other*	
RP Red Pine	OH Oak/Hdwd	SM Sugar Maple	Landowner Objective	SN Sanitation			
SR Red Spruce	OR N Red Oak	PP Pitch Pine	LT Long-term Mgt.				
			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



MASSWILDLIFE

DIVISION OF
FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

Chris Capone, Service Forester
Department of Conservation and Recreation
355 West Boylston Street
Clinton, MA 01510

Forest Cutting Plan No.:	036-36235-23
NHESP Tracking No.:	23-41592
Town:	Boylston
Road:	Main Street (Rt 70), Lot 5305
Landowner:	DCR/DWSP/OWM Wachusett/Sudbury
Preparer:	Gregory Buzzell, DCR
Date:	January 16, 2023

Dear Chris,

The Natural Heritage and Endangered Species Program (NHESP) of the Massachusetts Division of Fisheries and Wildlife ("the Division") has reviewed the above-referenced Forest Cutting Plan ("the Plan") pursuant to the special approval procedures of the Forest Cutting Practices Regulations (304 CMR 11.04(6)).

Eastern Whip-poor-wills (*Antrostomus vociferous*) listed as "Special Concern", inhabit the forests and open spaces surrounding the Wachusett Reservoir. While timber harvesting has the potential to enhance habitat for the species, there is a threat via direct mortality, to the species during the nesting season. Therefore, the Division recommends harvesting activities be conducted outside the nesting season as much as is practicable. The nesting season begins mid-April and ends in early July.

Based on details of the Plan, and information in the NHESP database, the Division does not expect activities proposed in the Plan to negatively impact Priority Habitat or result in a **Take** (as defined in 321 CMR 10.02) of plant or animal species protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). Therefore, the Division does not require that the Plan be modified at this time.

Please copy the Division on any proposed amendment, extension, and on the approved Plan for the site. If you have any questions about this letter, please contact Alexandra Echandi, Endangered Species Review Biologist at (508) 389-6354.

Sincerely,

Everose Schlüter, Ph.D.
Assistant Director

MASSWILDLIFE

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

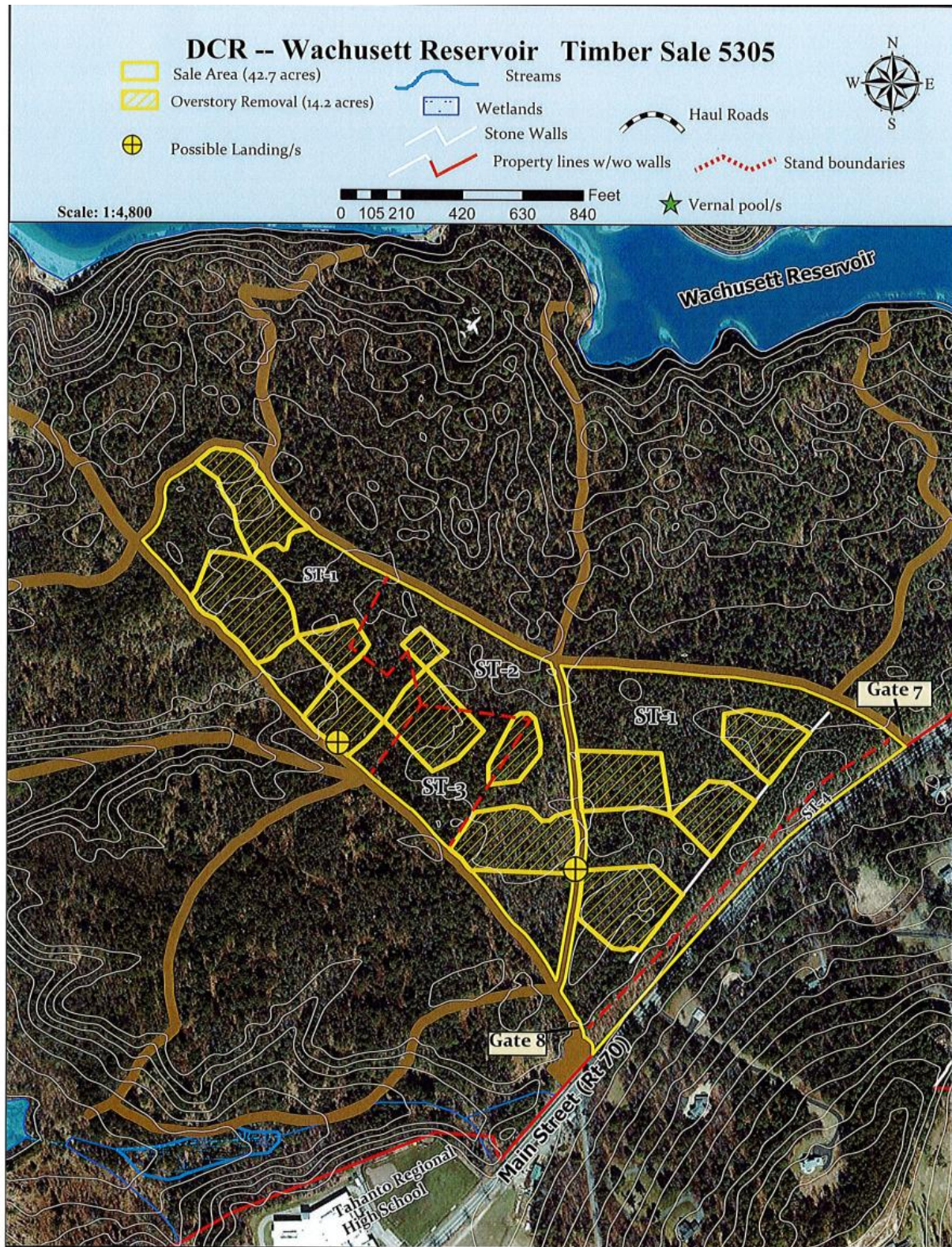


Figure 3. General locus map showing the location of the proposed timber harvest

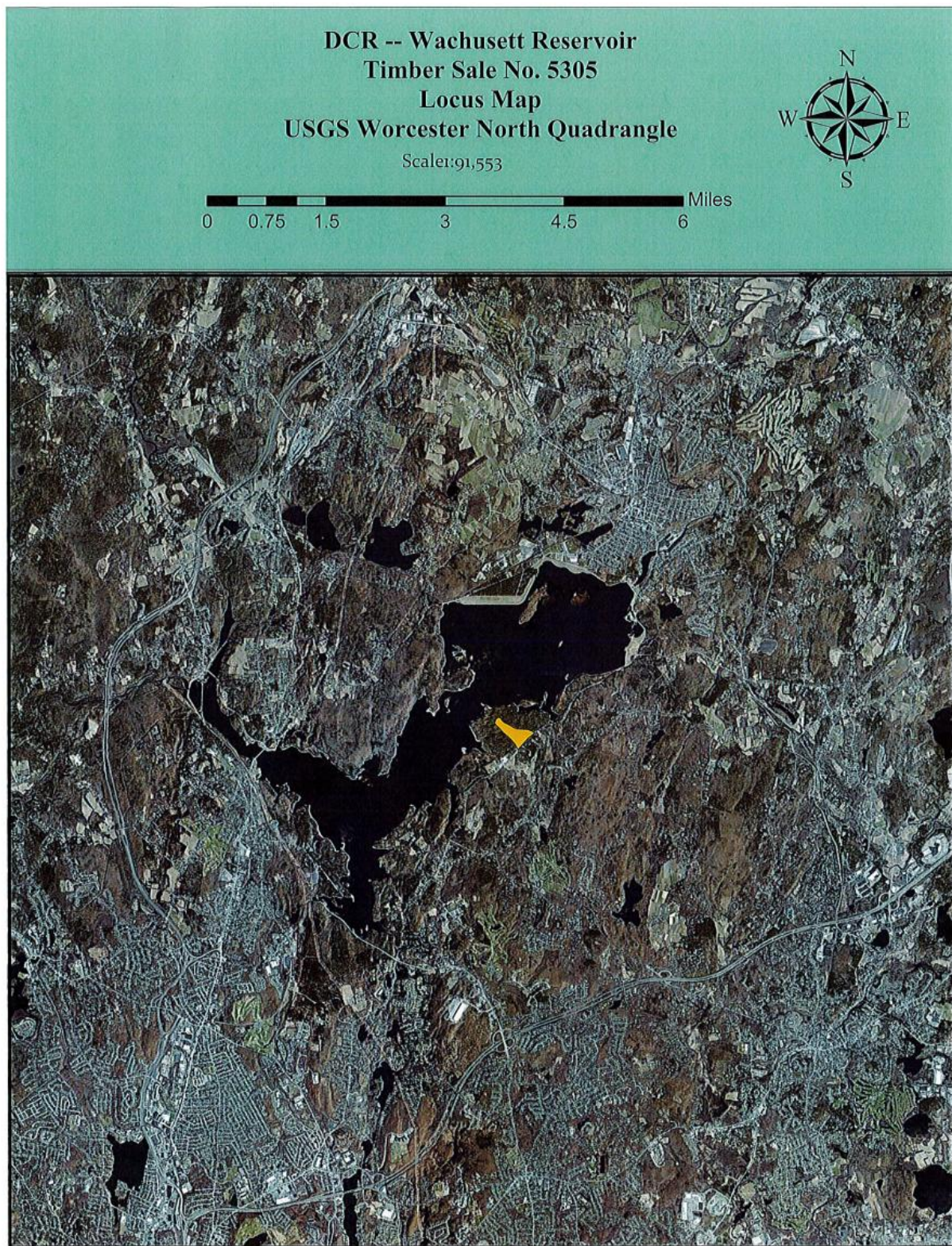


Figure 4. Pre-Harvest Photographs, A-C



A. The lot area is accessed through Gate 8.



B. An area with good advance regeneration. The white oak to the right of the center of the photo is an example of overstory retention within an area of overstory removal.



C. The overstory is being removed in this area with good advance regeneration and oaks of especially poor quality and vigor.

Figure 5. Post-Harvest Photographs, A-B



A. An area of overstory removal with good protection of the advance regeneration.



B. Another area of overstory removal with good protection of the advance regeneration. The white pine in the right-foreground was retained along with the dead oak in the middle-background. Both provide valuable wildlife habitat and add structural diversity.