

**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: 5304

DWSP Proposal ID: WA-22-245

DCR Forest Cutting Plan File Number: 282-36039-23

***Site Information***

Watershed: Wachusett

Town(s): Sterling

Acres: 97.8

Nearest Road: Redemption Rock Trail (Rt. 140)

Natural Heritage Atlas overlap?: No

Public Drinking Water Supply Watershed?: Yes

Forest Types: White Pine/Hemlock, Oak/Hardwood, Northern red oak

Area of Critical Environmental Concern (ACEC)?: No

Soils: Paxton and Canton fine sandy loam and Woodbridge fine sandy loam

Wetland Resources: Justice Brook and its narrow bordering vegetated wetland forms the western side of this sale area. There are several very small intermittent streams in the northern end of this area that flow westerly, joining Justice Brook.

Vernal Pools: There are three verified vernal pools and one potential vernal pool present. These are along the toe of the west-facing slope.

***Harvest Information***

Harvest Start Date: 11/29/2022

Harvest End Date: 12/12/2024

Number of Wetland Crossings: One

Number of Stream Crossings: One

***Best Management Practices Applied***

Stream Crossings: This small stream will be bridged if it is possible given the excessive rockiness of the site. Otherwise it will be protected with corduroy and tree tops as appropriate.

Filter Strips: No trees will be cut in the filter strip.

Wetland Crossings: An adequate amount of corduroy or swamp mats will be utilized.

Harvesting in Wetlands: There is harvesting in 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***

The forest on this west facing hillside above Justice Brook originated in the 1920's and 30's, presumably following pasture abandonment. The dominant species are white pine, red oak, black oak, white oak, hemlock and red maple. Most of the hemlock is in a mid-story position and it is infested with hemlock wooly adelgid. There are also scattered paper birch and bigtooth aspen. Along the intermittent streams and in the wet benches common in this area, white ash, sugar maple and yellow birch are found. A few blackgum are present in a seepy area in the southern end and basswood is present near Justice Brook. Beech is found in scattered pockets particularly in the southern half of the area. The understory is dominated by mountain laurel in the southern end of the area while witch-hazel is more common in the north. There limited understory in the white pine-hemlock stand on the top of the hill in the southeast portion of this area. With white pine in the overstory and a mid-story dominated by hemlock, this area was a heavily used winter deer yard for many years. This no longer seems to be the case...perhaps the thinning of the hemlock foliage by hemlock wooly adelgid is the cause. This timber sale also includes the remnants of Lot 5254. The western half of Lot 5254 was operated from 2017 to 2019. There are 11 overstory openings in the eastern half that were not harvested. These have been remarked and included in this timber sale operation. There is evidence of logging (e.g. old stumps and basal wounds) that took place roughly 30 years ago prior to MDC acquisition which occurred in 1997. The age structure is as follows; 0%, 0-20 years old; 0%, 21-40 years; 0%, 41-60 years; 0%, 61-80 years; 99%, 81-100 years and 1%, >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***

The remnants of Lot 5254 covers 24 acre. There are 11 openings totaling 7.9 acres, ranging in size from 0.2 to 2 acres. The main focus of this operation is on the 73.8 acres that was the former Baker parcel. Where adequate advance regeneration exists, openings will be made in the overstory to give it the light and space it needs to continue to grow and thereby create a new age cohort in this even-aged forest. This will occur in 5 openings on a combined 5.4 acres. These range in size from 0.5 to 1.4 acres in size. Given the soils, this site is well suited to growing hardwoods and so it is anticipated that hardwoods will comprise the majority of the new regeneration just as is comprises the majority of the advance regeneration. Partial overstory removal will occur in 4 areas on a combined 8.9 acres. The objective in these areas is to encourage the establishment of regeneration and to favor sugar maple where it is growing beneath taller and older oaks.

### ***Cultural Resources***

This project was reviewed by the DCR Archeologist. 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***

No unusual wildlife sightings were recorded when the site was visited in May of 2021. Stick nests were noted in a few locations. The nests appear to be inactive, however some raptor species often return to the same area to breed. Broad-winged hawks were heard calling overhead during the visit, and a northern goshawk was confirmed nesting in this general area several years ago. Any trees with newer or active raptor nests will be retained.

The verified and potential vernal pools will all be protected and treated according to DWSPs Conservation Management Practices.

### **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: 20368903 Case No.           
Date Rec'd: 11-1-23 Nat. Int.           
Earliest Start: 11-1-23 Nat. Hist. Imp.           
River Basin: NASHUA Pub. Dr. Wa. WASHSETT  
Gen. Obj.: LT ACEC         

Site Information

### Location

Town: Sterling Lot: 5304  
Road: Redemption Rock Trail (Rt. 143)  
Acres: 97.8 Proposed Start Date: 12/22  
Vol. MBF: 193.5 Vol. Cds: 236 Vol. Tons: 215

### Plan Preparer

Name: Gregory S. Buzzell  
Address: 180 Beaman Rd.  
Town, State, Zip: West Boylston, MA, 01585  
Phone: 774-261-1841  
Type of Preparer: Mass. Licensed Forester  
\*Mass. Forester License # 25  
\*Required for land under CE61, CE61A or Forest Stewardship

### Landowner

Name: DCR/DWSP/OWM Washsett/Sudbury  
Mailing Address: 180 Beaman St.  
Town, State, Zip: West Boylston, MA 01581  
Phone: 608-092-7806  
CE61  CE61A  Slew  \*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	BR			
Existing Structure	No			
Type of Bottom	ST			
Bank Height (ft)	2			
Stabilization	CO			

### Wetland Crossings

Indicate location on map	WC-1	WC-2	WC-3	WC-4
Length of Crossing	50			
Mitigation	DR/FR			
Stabilization	CO			

### Filter Strips

Indicate location on map	FS-1	FS-2	FS-3	FS-4-7
Width (50', 100', or VA)	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. Base Area (±50%)				

### Service Forester Comments

- PLEASE NOTIFY DCR SERVICE FORESTER AT START OF HARVEST OPERATION
- EXISTING SKID ROAD + WC
- CONSIDER VEGETAL POOL BMP'S (APPROVED)

Codes

Symbol/Prefix	Type of Crossing	Stabilization	Mitigation	Type of Bottom	Note
LT	Mass. Lic. For	CO	DR/FR	LI	Lodge
TI	Tim. Tit. Har	BR	MI	ST	Stone
IB	Impact Boyer	FD	CO	MU	Mud
LU	Landowner	PD	ST	GR	Gravel
OT	Other	OT	OT	OT	Other

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	MbFCds		MbFCds
White Pine	158.0	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	44.7
Hemlock		Black Oak	9.2
Spruce		White Oak	1.1
Other Sitwd.		Other Hardw.	
White Ash		Total MbF	1535
Beech		Cardwood (Cds)	236
White Birch		SW Pulp (Tons)	215
B & Y Birch	0.5	HW Pulp (Tons)	
Black Cherry		Chips (Tons)	

\*Note: Volumes and values indicated in this 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	WH	OC	HM	
Acres	62.8	28	24	
Landowner Objective	LT	LT	LT	
Designation of Trees	CT	CT	CT	
Type of Cut	SH	SH	SH	
Source of Regeneration	AD	AD	AD	

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 Freida*

Signature of landowner(s)

*10/25/2000*

Date

Service Forester

**Determination and Status** *282-36139-23*

	Approved	Disapproved	Expires
Cutting Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>11/1/24</i>
	<i>[Signature]</i>		<i>11/6/27</i>
	Signature of Service Forester/Director's Agent		Date
Extension	<input type="checkbox"/>	<input type="checkbox"/>	Expires
			Ser. Per. Ints
Amendment	App 1	Dis 1	App 2
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Final Report and Comments**

I hereby certify that the above described Forest Cutting Plan and all relevant statutes have been substantially completed with.

Signature of Service Forester/Director's Agent \_\_\_\_\_ Date \_\_\_\_\_

Codes

Forest Type				Designation of Trees	Type of Cut	Immediate Harvest	Source of Regeneration
WP White Pine	TK Hemlock	OM Mixed Oak	CT Cut Tree	SH Shelterwood	Immediate Harvest	AD Advanced	
WE White Fir	HP Hardwood	RM Red Maple	LT Live Tree	ST Seed Tree	CT Commercial Thin	SE Natural Seed	
WH White Hard	BC Black Cherry	FE Forest	SB Small Boundary	CC Clear Cut	NT Non-Commercial Thin	PL Plant	
WO White Oak	DM Deciduous Maple	SP Spruce/Fir	OT Other	SE Selective	NS Non-Standard System*	CU Conifer	
RP Red Pine	HO Oak/Hard	SM Sugar Maple	Landowner Objective	SA Salvage	HG Highgrade*	US Direct Seed	
SR Red Spruce	MO N. Red Oak	FP Pitch Pine	LT Long-term Mgt.	SN Snags	DL Diameter Limit*	OT Other	
			ST Short-term Har.	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: Sterling

File Number: 282-36139-23

<b>BMPs</b>	<p><u>SC-1 is a very rock site. If it is not possible to install a timber bridge or swamp mats, the crossing will be protected with corduroy and logs as appropriate.</u></p> <p><u>WC-1 is on a haul road that was previously used during the operation of our Lot 5254 (CP #282-7612-15). The wood that was used to corduroy it is still in place. However, it will need to be adjusted and augmented.</u></p> <p><u>No cutting will occur in any of the 7 variable-width filter strips (there is only space on the firm for 4).</u></p>
<b>Silviculture</b>	<p><u>In order to release advance regeneration, 16 openings in the overstory are being created, covering 13.4 acres. These openings range from 0.18 acre to 2 acres in size with an average of 0.84 acres. They are well distributed throughout the area taking advantage of the advance regeneration comprised of white pine, oaks, and other hardwoods.</u></p> <p><u>Partial removal of the overstory will occur in 4 locations covering a combined 8.9 acres. The goal in these areas is primarily to encourage the establishment of regeneration along with the encouragement of sugar maple in the most northern partial-cut patch.</u></p>
<b>Object</b>	<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>
<b>Other</b>	<p><u>All haul roads as shown on the map have been flagged and/or marked with vertical stripes of paint.</u></p> <p><u>The eleven openings in the southern part of the sale area were part of the previously mentioned Lot 5254 (CP# 282-7612-15). These did not get cut back in 2017/2018.</u></p>

dcr



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

FILE # 282.36139.23

# 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 / DMSR / DWM W. BOWLSTON 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

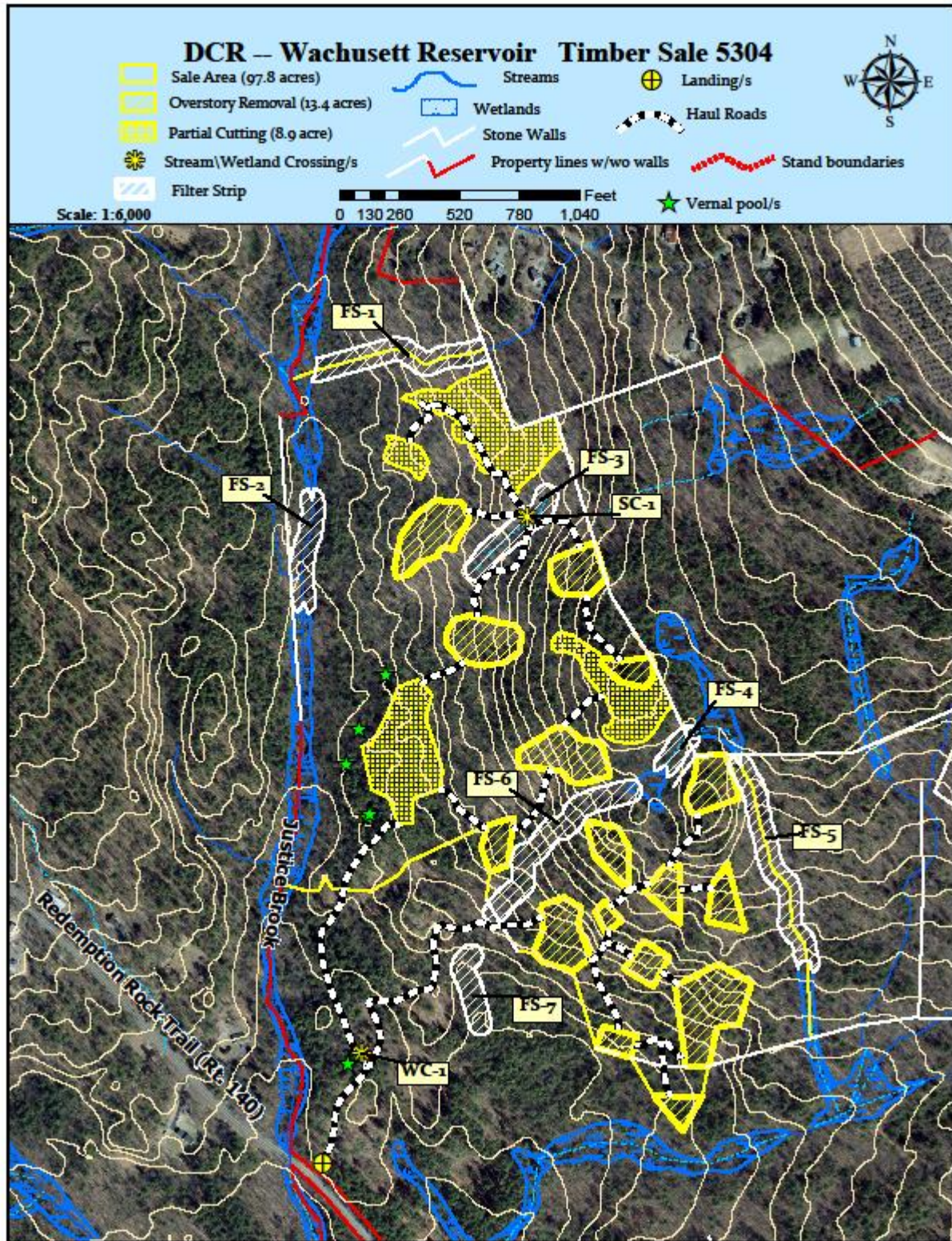
RT. 140 lot. (5304) STEALING

Approval Date 11/16/22  
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



# DCR – Wachusett Reservoir Timber Sale 5304

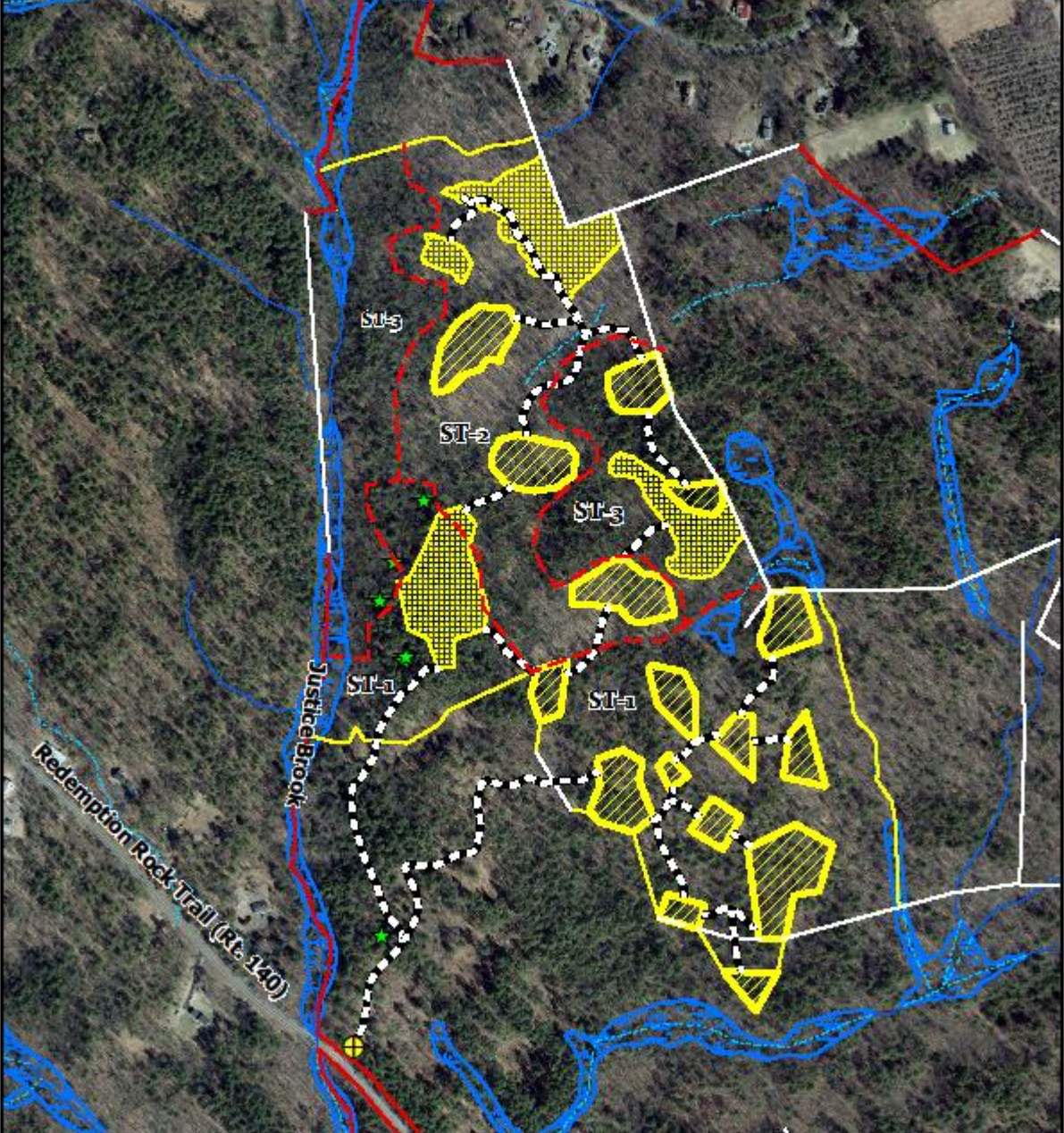
- Sale Area (97.8 acres)
- Overstory Removal (13.4 acres)
- Partial Cutting (8.9 acre)
- Stream/Wetland Crossing/s
- Filter Strip
- Streams
- Wetlands
- Stone Walls
- Property lines w/wo walls
- Landing/s
- Haul Roads
- Stand boundaries
- Vernal pool/s



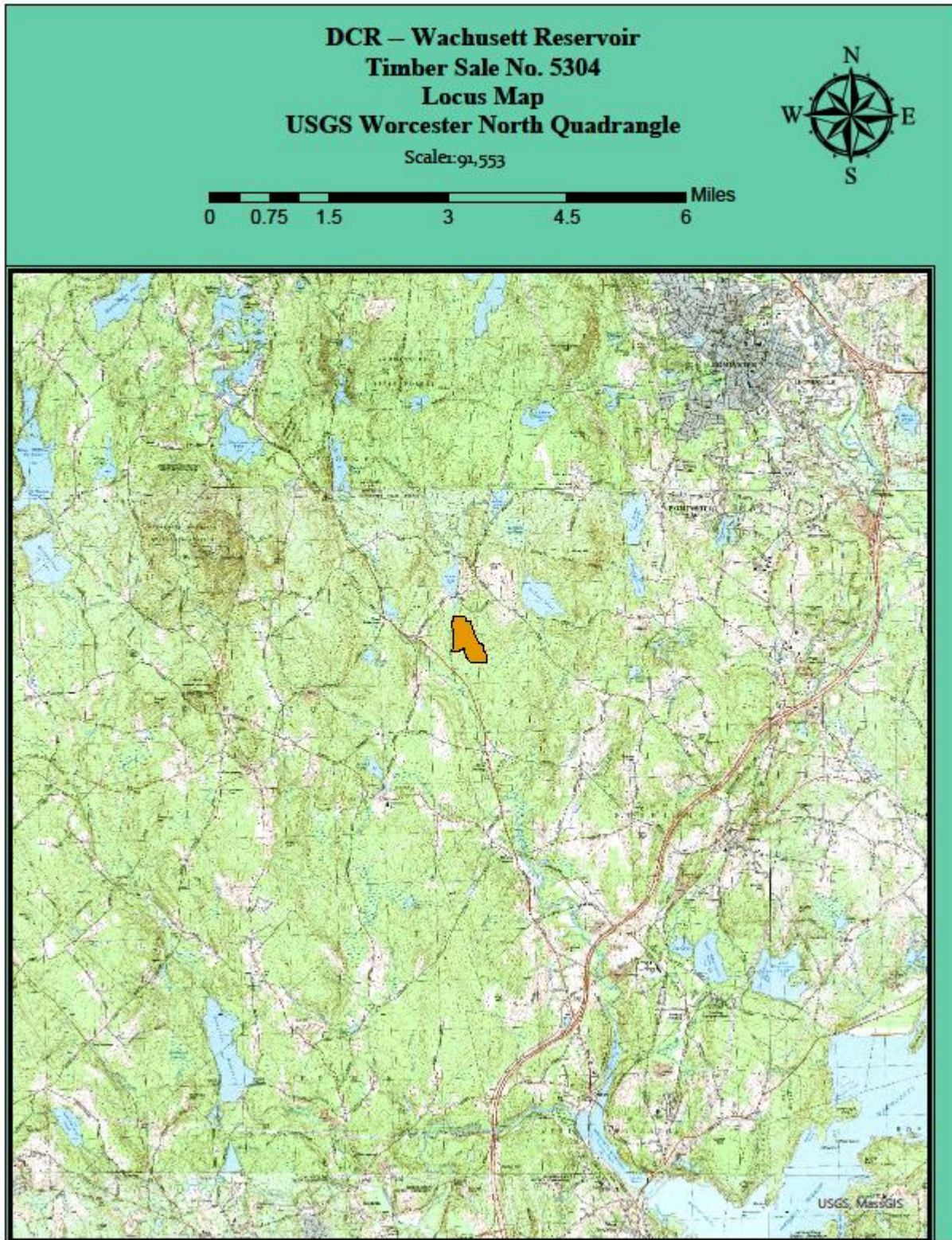
Scale: 1:6,000



Base Map 2



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



**Figure 4. Pre-Harvest Photographs, A-D**



**A. The landing just off Redemption Rock Trail (Rt. 140)**



**B. This is the area with a heavy mountain laurel understory. The overstory is being partially removed, which along with intentionally damaging the laurel should encourage the establishment of regeneration.**



C. The rocky stream crossing.



D. An area of overstory removal where there is good pine, hemlock and hardwood regeneration. The white pine in the foreground is being retained to provide valuable structure diversity.

**Figure 5. Post-Harvest Photographs, A-D**



**A. The landing.**



**B. This is the area with a heavy mountain laurel understory. The overstory has been partially removed, which along with the intentional damage to the laurel should encourage the establishment of regeneration.**



C. An area where the overstory was removed, giving the hemlock, white pine and hardwood understory the light and space and needs to continue to grow.



D. Another area of overstory removal where the predominantly hardwood regeneration was well protected.