

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

Project Title: Lot 5264

DWSP Harvest Permit Number: 5264

DWSP Proposal ID: WA-17-248

DCR Forest Cutting Plan File Number: 282-8469-17

Site Information

Watershed: Wachusett

Town(s): Sterling

Acres: 73.3

Nearest Road: Justice Hill Road

Natural Heritage Atlas overlap?: No

Public Drinking Water Supply Watershed?: Yes

Forest Types: White Pine-Hardwood, Oak-Hardwood

Area of Critical Environmental Concern (ACEC)?: No

Soils: Paxton fine sandy loam.

Wetland Resources: There is a small wetland just to the west of the top of the hill. An intermittent stream is just south of the top of the hill and flows southerly.

Vernal Pools: There is one vernal pool located within the wetland.

Harvest Information

Harvest Start Date: 11/20/2016

Harvest End Date: 12/7/2018

Number of Wetland Crossings: None

Number of Stream Crossings: None

Best Management Practices Applied

Stream Crossings: There are no stream crossings.

Filter Strips: No trees are being cut in the filter strips.

Wetland Crossings: There are no wetland crossings.

Harvesting in Wetlands: There is no harvesting in the wetland.

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 "Stuart Pasture" is a typical abandoned pasture that is dominated by low quality white pine. A timber sale in the early 1990's removed the best quality pines and left the trees with multi-stemmed crowns. In addition to white pine the overstory is dominated by black birch, red oak, red maple, black cherry along with a smaller component of paper birch and bigtooth aspen. The logging in the early 1990's has led to a developed mid story made up of red maple, black birch, red oak and paper birch poles. There is good advance regeneration made up of red oak, red maple, white pine, white oak, hickory, black cherry and white ash.

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 73 acres as well as the 1779 acres that the DCR owns that flow into the Stillwater River. This operation will contribute a little over 15 acres of additional young forest towards the goal of having 3 age classes of forest well distributed throughout this forest.

Silvicultural Objectives

Because of the good advance regeneration, openings will be made to release this regeneration resulting in a new age cohort. With the ultimate goal of having at least three distinct age cohorts within every working unit, removing the overstory on one third of this working unit will result in approximately 20 acres of new age class. The species composition will be roughly the same as it is now since the advance regeneration is just as diverse as the overstory. However, the proportion of the species will change. There is far less white pine in the advance regeneration than there is in the overstory and this is appropriate given the character of the soil on this hill which is better suited to hardwoods than pine. This operation will focus making openings that will remove the low quality multi-stemmed white pines.

Cultural Resources

The west corner of this working unit has an intricate (but faded and previously damaged by logging) network of stonewalls, along with a cellar hole measuring 25'x15'. No cutting is going to occur in this immediate area.

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

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 10 2016

For DCR Use Only:

File Number 282-8469-17 Case No. _____
Date Rec'd 11/10/16 Nat. Hert. NO
Earliest Start 11/30/16 Nat. Hert. Imp. NO
River Basin NASHUA Pub. Dr. Wat. WACHUSETT
Gen. Obj. LT ACEC NO

Site Information

Location

Town Sterling Lot 5264
Road Justice Hill Road
Acres 73.3 Proposed Start Date 12/01/16
Vol. MBF 86.5 Vol. Cds. 142 Vol. Tons 515

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 Wachuset/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				
Existing Structure				
Type of Bottom				
Bank Height (ft)				
Stabilization				

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	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

* REVIEWED UNDER DROUGHT CONDITIONS.
* ALL SKID TRAILS / ROADS ARE EXISTING
* SEE ATTACHED VEGETAL POOL BMPs

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 Piled	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*

Table with 4 columns: Species, Mbf/Cds, Species, Mbf/Cds. Rows include White Pine, Red Pine, Pitch Pine, Hemlock, Spruce, Other Sftwd., White Ash, Beech, White Birch, B & Y Birch, Black Cherry.

*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

Table with 5 columns: Indicate location on map, ST-1, ST-2, ST-3, ST-4. Rows include Forest Type, Acres, Landowner Objective, Designation of Trees, Type of Cut, Source of Regeneration.

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.

[X] 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.

Handwritten signature of landowner(s)

11/9/16 Date

Service Forester

Determination and Status

Approved [X] Disapproved [] Expires 11-10-2018. Signature of Service Forester/Director's Agent: [Handwritten Signature] Date: 11-17-2016

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

Table with 4 columns: Forest Types, Designation of Trees, Type of Cut, Source of Regeneration. Rows include 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, CT Cut Tree, LT Leave Tree, SB Stand Boundary, OT Other, LT Long-term Mgt., ST Short-term Har., SH Shelterwood, ST Seed Tree, CC Clear Cut, SE Selection, SA Salvage, SN Sanitation, Intermediate Harvests, Non-Standard Systems, AD Advanced, SE Natural Seed, PL Plant, CO Coppice, DS Direct Seed, OT Other.

*If Other (OT) or a non-standard system is used on application must be shown on attached report.

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: DCE - DWSP

Town: Sterling

File Number: 282-8469-17

BMPs	<p><u>There are no stream or wetland crossings. The Landing is .47 miles from the sale area (located on Justice Hill Road). The haul road to access the sale is (95%) preexisting.</u></p>
Silviculture	<p><u>In order to release advance regeneration, 15 openings in the overstory are being created, covering 15.4 acres. These openings range from 0.34 acres to 1.86 acres in size with an average of 1.03 acres. They are well distributed throughout the sale area.</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>In between the openings near the streams and vernal pool have skid trail flagging. There is an underground phone line that is also used as a trail that runs from east to west near the southern boundary of the sale.</u></p>

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

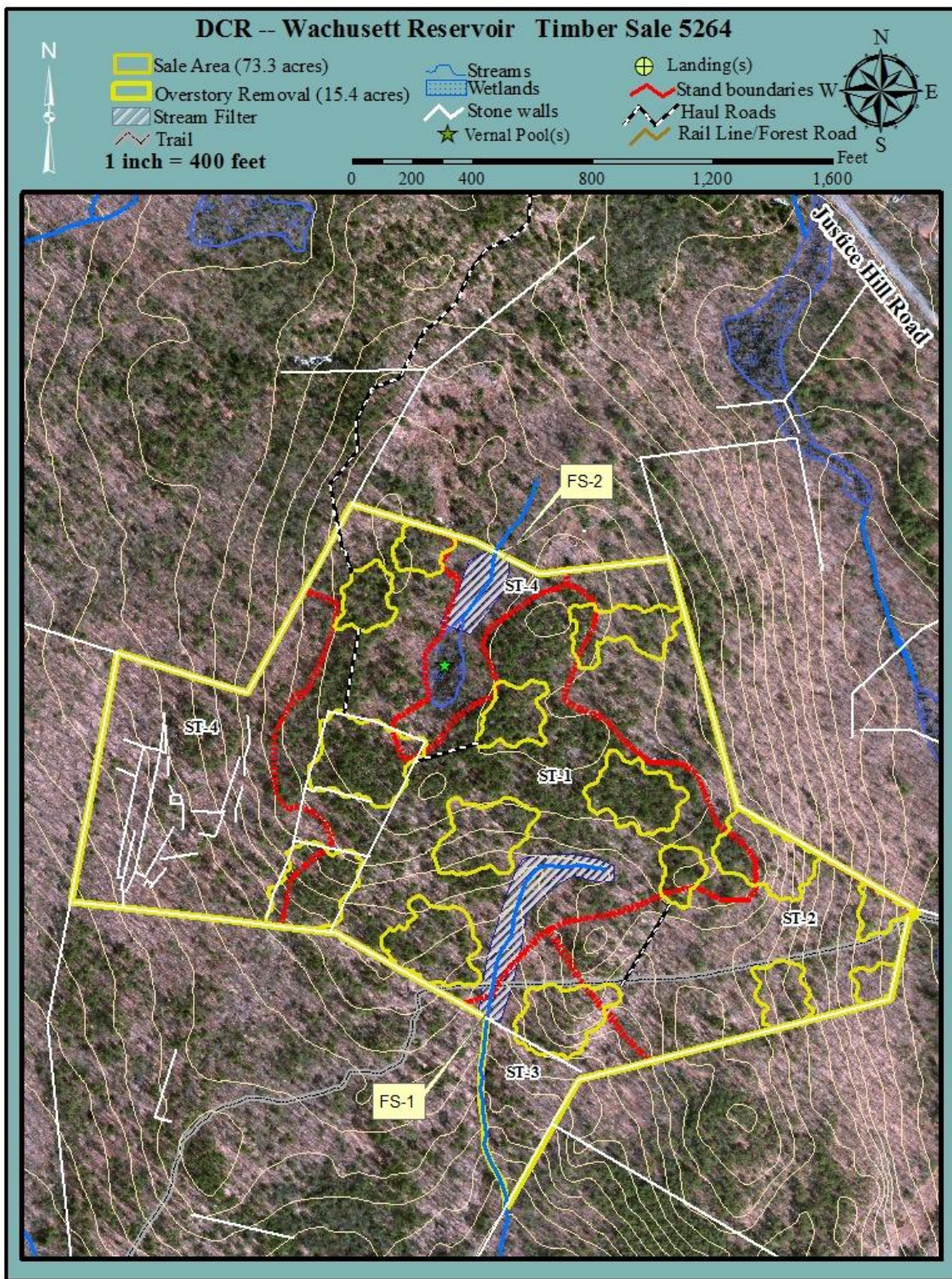


Figure 3. General locus map showing the location of the proposed timber harvest

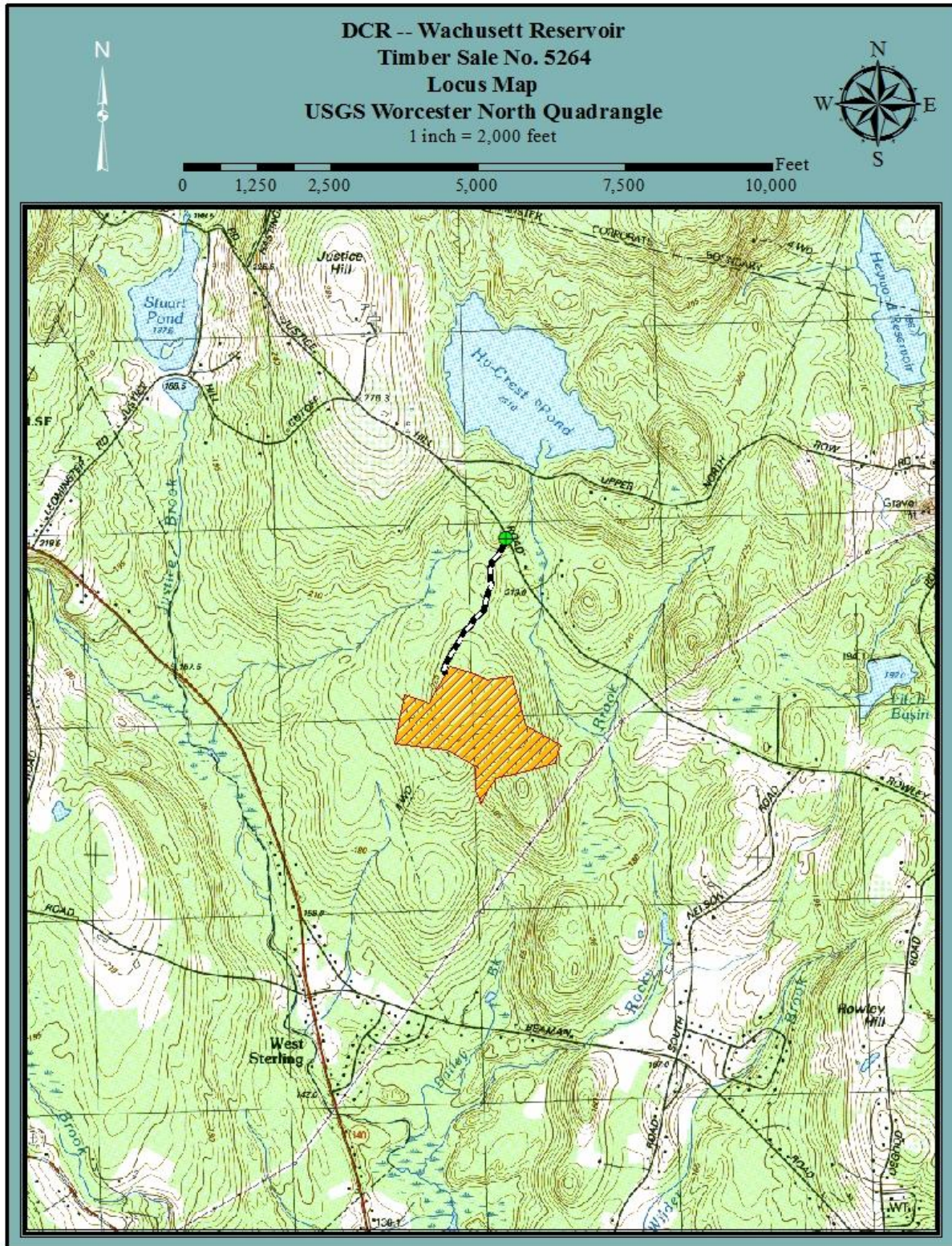


Figure 4. Pre-Harvest Photographs, A-D



A. Landing location on Justice Hill Road in Sterling.



B. This is a dying white pine which will be retained after the harvest to benefit various wildlife.



C. An area of overstory removal to release the young trees beneath. Notice the abundant oak advance regeneration in the foreground.



D. This large diameter black cherry will be retained in this opening and will provide ample soft mast for wildlife in addition to being a long term seed source for the site.

Figure 5. Post-Harvest Photographs, A-C



A. The landing area as seen from Justice Hill Road.



B. The black cherry in the foreground and the other overstory hardwoods were retained in this overstory removal area where there is good hardwood and white pine regeneration.



C. In this area of good hardwood regeneration, the dead pine snags were retained for their habitat diversity value.