Massachusetts Department of Conservation and Recreation
Division of Water Supply Protection, Office of Watershed Management

Forest Management Project Summary

Project Title: Lot 5259
DWSP Harvest Permit Number: 5259
DWSP Proposal ID: WA-16-88
DCR Forest Cutting Plan File Number: 282-8092-16

Site Information
Watershed: Wachusett
Town(s): Sterling
Acres: 40.5
Nearest Road: Campground Road
Natural Heritage Atlas overlap?: No
Public Drinking Water Supply Watershed?: Yes
Forest Types: Northern red oak, mixed oak
Area of Critical Environmental Concern (ACEC)?: No
Soils: Woodbridge fine sandy loam, a deep, well-drained till soil.
Wetland Resources: A very small, intermittent brook originates and flows in the northern end of this area.
Vernal Pools: None known.

Harvest Information
Harvest Start Date: 5/1/2016
Harvest End Date: 12/1/2017
Number of Wetland Crossings: None
Number of Stream Crossings: None

Best Management Practices Applied
Stream Crossings: There are no stream crossings.
Filter Strips: There are no filter strips.
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 number: 025
Phone number: 774-261-1841
Email: greg.buzzell@mass.gov

Narrative

General Description/Forest Composition/History

This forest is dominated by red and black oak with far less white pine, red maple, black birch, hickory, sugar maple and sassafras. There is very little topography, but as the ground slopes very gently to the north, the proportion of black oak gradually decreases as the proportion of red oak increases. A timber sale in 1989 on this entire area and another in 2004 in the eastern part, have encouraged the establishment of advance regeneration comprised of red oak, black oak, white pine, red maple, white oak, hickory, sassafras and sugar maple. Shrub species are dominated by witch-hazel, huckleberry, lowbush blueberry and maple-leaved viburnums.

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 40.5 acres as well as in the 519 DCR-owned acres from which water flows into East Waushacum Pond. Only 7% of the forest is comprised of trees less than 20 years old with 92% of the forest being in the 81-100 year old category. The ideal protection forest would have at least 3 distinct age classes of trees distributed throughout this sale area.

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. 11 openings will be made that range in size from about 1/3rd to nearly 2 acres in size. These openings total 9.8 acres, which represents 24% 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. However, there are known pre-Contact sites in this part of town so general practices to minimize the compaction and disturbance of soil will be followed. Care will be taken to minimize disturbance to stone walls or any other cultural artifact if any are found.

Rare or Endangered Species

There are no critical habitats or known rare or endangered plants or wildlife. All DWSP Best Management Practices for wildlife management such as the maintenance and encouragement of mast-producing species snag and den trees are being followed.

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)

FEB 2 2 2016

For DCR Use Only:

File Number	282-8092-16	Case No.	
Date Rec'd	2/22/16	Nat. Hert.	NO
Earliest Start	3/8/16	Nat. Hert. Imp.	NO
River Basin	NASHUA	Pub. Dr. Wat.	YES-WACHUSETT
Gen. Obj.	LT	ACEC	NO

Site Information

Location

Town Sterling
Road Campground Road
Acres 40.5 Proposed Start Date 04/16
Vol. MBF 34.2 Vol. Cds. 152 Vol. Tons

Plan Preparer

Name Gregory S. Buzzell
Address 180 Beaman Rd.
Town, State, Zip West Boylston, MA, 01583
Phone 508-792-7806 Ext 317
Type of Preparer Mass. Licensed Forester
*Mass. Forester License # 25
*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				
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)	50'			

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 ROADS/TRAILS ARE EXISTING

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

Forest Products

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine		Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	17.5
Hemlock		Black Oak	16.7
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash		**Total Mbf**	34.2
Beech		**Cordwood (Cds)**	152
White Birch		**SW Pulp (Tons)**	
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.

Stand Treatment

Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	OR	OM		
Acres	21.0	19.5		
Landowner Objective	LT	LT		
Designation of Trees	CT	CT		
Type of Cut	SH	SH		
Source of Regeneration	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.

Signature of landowner(s) — Date: 2/17/16

Service Forester

Determination and Status

	Approved	Disapproved	Expires
Cutting Plan	☒	☐	2-22-2018

Signature of Service Forester/Director's Agent — Date: 3-3-2016

			Expires	Ser. For. Ints.
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 Blck 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

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 Wachusett

Town: Sterling

File Number: 282 - 8092-16

BMPs

While streams and wetlands are limited on this sale, care will still have to be exercised to perform the work when the ground is suitably dry, frozen or snow-covered. This very gently sloped property has a high water table in the spring and is slow to dry out. This lesson was learned in 1989 when this area was first cut. The skidder ruts, while never very deep, still persist to this day and account for some erroneous DEP photo interpretations of the streams.

Silviculture

In order to release advance regeneration, 11 openings in the overstory are being created, covering 9.8 acres. These openings range from 1/3th to nearly 2 acres in size with an average of 0.9 acres. They are well distributed throughout the area taking advantage of the advance regeneration comprised of white pine, oaks and other hardwoods. No trees have been marked between any of these patches.

Objectives

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.

Other

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

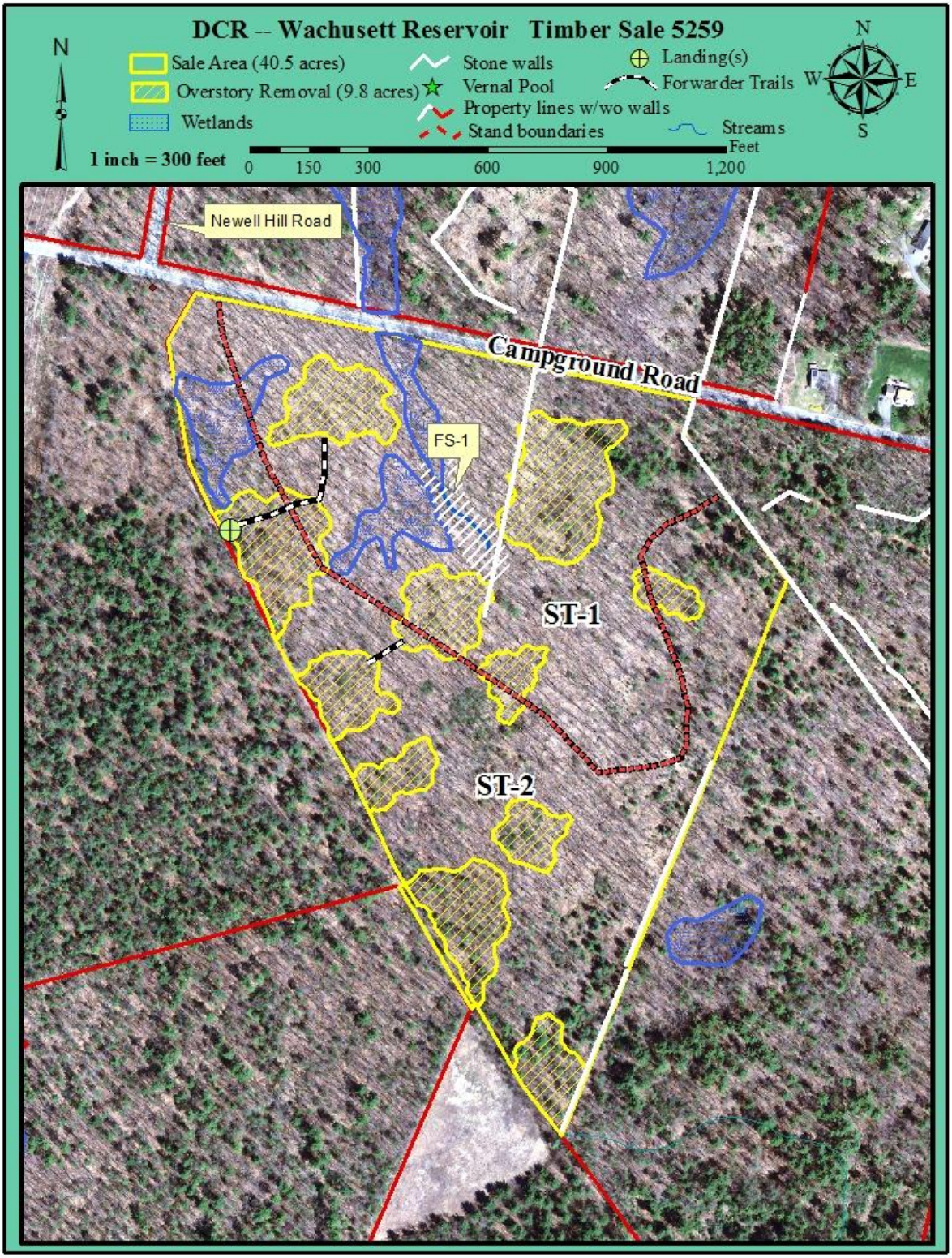

Figure 3. General locus map showing the location of the proposed timber harvest

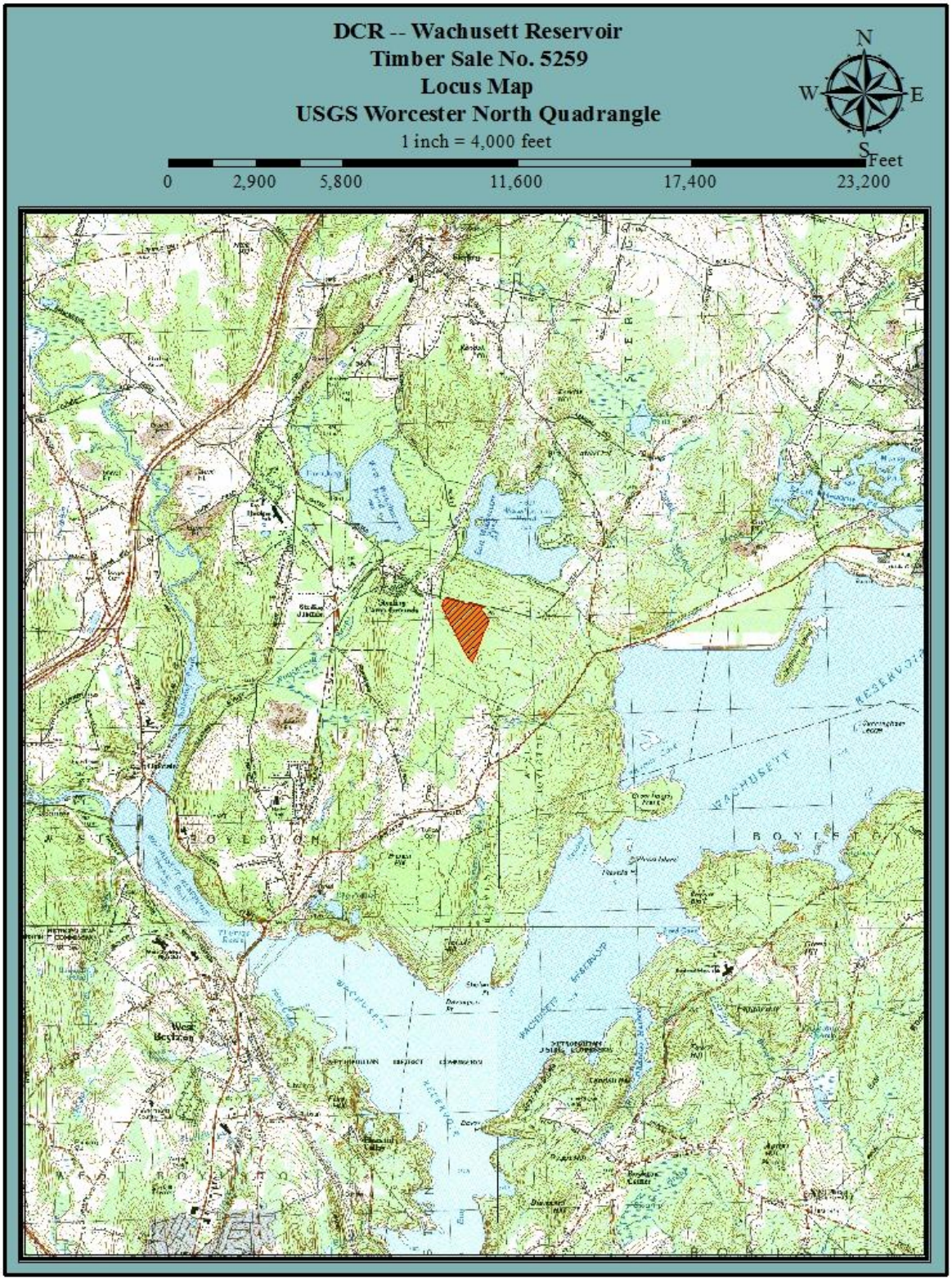

Figure 4. Pre-Harvest Photographs, A-C

A. The entrance to the timber sale area off of Campground Road in Sterling across from the intersection with Newell Hill Road.

B. The oak dominated overstory is being removed in this area to give the young white pines and hardwoods the space and light they need to continue to develop.

C. The overstory in this area is being removed to release the hardwood saplings. However, the white pine in the foreground is being retained to provide important structural diversity. It is anticipated that trees such as these will never be cut but will be allowed to live out their natural life-span.

Figure 5. Post-Harvest Photographs, A-C

A. The overstory of older trees was removed to give the younger understory trees the space and light they need to continue to grow.

B. The very large red oak was left in this nearly 2 acre opening to provide structural diversity as well as a long-term source of mast.

C. This is the view from the woods road looking north with one of the many overstory removal patches on the right.