

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

Project Title: Carter Road North Red Pine harvest
DWSP Harvest Permit Number: 1060A
DWSP Proposal ID: HA 18-13W
DCR Forest Cutting Plan File Number: 234-33862-22

Site Information

Watershed: Quabbin
Town(s): Petersham
Acres: 66.3
Nearest Road: Carter Road off Hell Huddle Road
Natural Heritage Atlas overlap: No
Public Drinking Water Supply Watershed: Yes
Forest Types: Red pine, oak hardwood, and white pine hardwood
Area of Critical Environmental Concern (ACEC): No
Soil(s): Excessively drained Merrimac fine sandy loam, band of thin well drained Charlton-Chatfield-Hollis association and Hinckley loamy sand on eastern edge.
Wetland Resources: A wetland and perennial stream abut lot to the north, several intermittent streams and small, isolated wooded wetlands are within the harvest boundary.
Vernal Pools: One abuts lot on the western edge.

Harvest Information

Harvest Start Date: 12/5/2022
Harvest End Date: 3/3/2023
Number of Wetland Crossings: 0
Number of Stream Crossings: 2

Best Management Practices Applied

Stream Crossings: Seed and corduroy used for soil stabilization
Filter Strips: Four variable width strips utilized
Wetland Crossings: N/A
Harvesting in Wetlands: N/A

DWSP Forester supervising this harvest

Name: Douglas Hutcheson
Forester License number: 375
Phone number: (413) 237-9713
Email: douglas.hutcheson@mass.gov

Narrative

General Description/Forest Composition/History

This lot is in Petersham at the end of Carter Road and is best accessed through gate 43. Pottapaug Pond is to the west, and a short section abuts it. The lot ends at an unnamed perennial stream which flows west into the pond. Most of the area was red pine plantations with some adjoining white pine and oak/hardwood stands included.

The red pine has declined from a non-native insect, the red pine scale, and a secondary pathogen, root rot, is also present. Spongy Moth (hardwoods), Emerald ash borer (ash), Hemlock woolly adelgid and scale (hemlock) and various funguses and needle casts (white pine), have impacted this area in recent years and have caused mortality and decline to the noted species. Sapling to pole sized white pine and black birch are common in the understory with some mixed hardwoods. Seedlings of most native tree species are scattered throughout, though there is not much oak present. The areas of red pine had some larger groups of saplings established, the other areas received lighter treatments, and had a few small groups of regeneration established, but most of those were over topped and not very vigorous.

The primary tree species present in overstory outside of the plantations are white pine and mixed oaks. Other hardwoods include black and paper birch, red maple, aspen, ash, and hickories. Some hemlock is scattered along the northwest edge on bank sloping to a large wetland.

Both moose and deer frequent here but browse was judged to be light to moderate but is probably impacting species composition. The area around the cellar hole and landings are heavily impacted by invasives, particularly Oriental bittersweet and Japanese barberry, with Multiflora rose, Honey suckle and Winged euonymus common. Native grape vines are also present in these areas and along wetlands. It impacts regeneration and even overstory trees, as is the bittersweet. The overstory in these areas was in poor condition and often dead or dying so the invasives are being released anyway. Ideally the invasives will be eradicated in the future with herbicide treatments.

The stone walls on this lot attest to its history of being cleared for agriculture, mostly for pasture. When the farmland was abandoned, probably in the late 19th or early 20th century, it reverted to forest. The red pine was planted in the early '40's possibly from seedlings raised in nurseries run by the MDC. It was planted in old fields/pastures that hadn't yet reverted to forest. The red pine plantations were first harvested in 1994 (lot 651, SS 19 south). The white pine stands on the west side were thinned in 1993 (lot 595A) and the southern section was cut again in 2002 (lot 841). The white pine and oak/hardwood stands on the east side were harvested in 1999 (lot 758).

Site Selection

The primary goal of the watershed forest management program is to create and maintain a forest that provides high quality drinking water to current users and future generations. To achieve this, DWSP has determined that the forest should contain a diversity of species in various stages of development (seedlings through large legacy trees). In addition, the forest should be vigorous; actively growing and regenerating. A forest in this condition is resilient to and can quickly recover from small- and large-scale disturbances such as diseases, insect infestations, ice storms and hurricanes.

This area was chosen to be harvested mainly to harvest the remaining red pine, which is not a native species, and is declining throughout the site. The additional areas treated were selected to expand upon the past treatments to further release or establish regeneration and hopefully create the more diverse forest described above. The areas that had red pine and where openings are created won't need to be treated again for 30+ years. The remaining areas should be looked at again in around 10 years. Those established groups should be expanded upon when abutting stands are treated.

Silvicultural Objectives

The goal of this harvest is to build on the success of the previous harvests by continuing the process of establishing new tree seedlings and providing space for existing regeneration to expand and grow. The diversity of native species present is being maintained. This combination of structural and species diversity builds resistance and resilience into the forest.

Guided by the principles stated above, the primary purpose of this harvest is the establishment of a new age class by harvesting part of the overstory in small groups, up to 5 acres in size, to foster regeneration. Due to the poor condition of the non-native red pine almost all the remaining live stems will be cut. On the rest of the area groups were placed according to our guidelines. Areas where there were clusters of trees that were declining or had poor stem form, often due to insects, diseases, or storm damage, were specifically targeted. Existing groups of regeneration created from the previous cuts were expanded upon by creating a new abutting group. Areas that contain mainly younger well-formed hardwoods were thinned.

Wherever possible wildlife habitat features were maintained and protected, such as snags (dead trees) and trees with cavities or nests. Exceptional individuals of all species present were retained in the stand for seed and to enhance diversity and store carbon. These trees typically are vigorous and barring extreme weather events or insect/disease outbreaks are expected to survive at least another 20 years.

Cultural Resources

Stone walls are numerous throughout this area. There are many breaks and barways in these walls and they can be used to protect the stone walls during the upcoming harvest. There are several cellar holes which will also be protected. This is in keeping with DWSP's standard practice, which dictates that every effort is made to keep existing historic features intact. Otherwise, this area has been determined not to be culturally or archeologically sensitive based on a review by the DCR Archaeologist. To help protect the cultural resources logging equipment will be restricted to cut to length operations with forwarder transport required, pole length skidding of red pine will be allowed.

Rare or Endangered Species

Pottapaug Pond contains a species of special concern and care will be taken to buffer shoreline and avoid any silt entering pond or the streams flowing into it. The lot contains no other critical habitats or known rare or endangered species. There is one vernal pool on the edge of the harvest. The uplands are home to a variety of wildlife including deer, turkey, coyote, and moose.

Figures

Figure 1. Final Forest Cutting Plan

04-19-22A 7:57 AM

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)

Final (3/23)

For DCR Use Only:

File Number	234-33862-22	Case No.	N/A
Date Rec'd	4-19-22	Nat. Hert.	NO /
Earliest Start	5-4-22	Nat. Hert. Imp.	NO
River Basin	Chicopee	Pub. Dr. Wat.	yes
Gen. Obj.	LT	ACEC	NO

Site Information

Location

Town Petersham Quabbin lot 1060A
 Road Carter Rd inside gate 43
 Acres 66.3 Proposed Start Date 5/1/2022
 Vol. MBF 430 Vol. Cds. 232 Vol. Tons 991

Plan Preparer

Name Steven J. Wood
 Address DCR, Division of Water Supply Protection
485 Ware Rd.
 Town, State, Zip Belchertown, MA 01007
 Phone (413) 213-7944
 Type of Preparer Mass. Licensed Forester
 *Mass. Forester License # 257
 *Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name DCR, Division of Water Supply Protection
 Mailing Address 485 Ware Rd.
 Town, State, Zip Belchertown, MA 01007
 Phone (413) 323-6921
 Ch61 Ch61A Stew *Case # _____
 Est. Stumpage Value \$30,000

Licensed Timber Harvester**

Name Justin McKinney
 Address PO Box 688
 Town, State, Zip Wareham, MA 01083
 Phone 413.668.2055
 Mass. Lic. Harvester # 2023.314

**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	PO	PO		
Existing Structure	yes	no		
Type of Bottom	GR	GR		
Bank Height (ft)	0.3	0.1		
Stabilization	SE/CO	SE/CO		

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	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

Harvest >50% in FS-3 for removal of diseased + dying Red Pine to conserve Soil Integrity - AR

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 Polcd	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*

Table with 4 columns: Species, Mbff/Cds, Species, Mbff/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. Mbff = 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]

4-4-2022

Signature of landowner(s)

Date

Service Forester

Determination and Status

Form with checkboxes for Approved, Disapproved, Expires, Extension, Amendment. Includes handwritten dates like 4-19-24 and 5-16-22.

Final Report and Comments

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

[Handwritten Signature] 3-9-23 Date

Codes

Table with 4 columns: Forest Types, Designation of Trees, Type of Cut, Source of Regeneration. Lists various codes like WP, WK, WH, WO, RP, SR and their corresponding tree types.

*If Other (OT) or a non-standard system is used an explanation must be given on attached narrative page

Forest Cutting Plan

Narrative Page (Effective Date: 1/1/04)

Use this page to provide further explanation or if Other (OT) was used in any category on pages 3 or 4.

Landowner DCR, DWSP

Town Petersham

File Number _____

BMPs

Use this Section to provide further explanation or if Other (OT) was used in any category in the Best Management Practices Section on Page 3.

Would like to allow use of tracked harvester in filter strips to minimize disturbance to stream banks and protect established regeneration and poles.

Trees to be cut are marked with blue paint, orange paint on some high value save trees, opening boundaries and wildlife (W) trees. Sale boundary is double orange strip. The old red pine plantation has been cut several times and is having most of the remaining overstory removed, it is dying from scale and root rot. The surrounding white pine and oak stands have also been cut at least twice but though have many poorly formed stems there is enough well formed stems to grow for another 10 years on sections. These areas are treated with group selection with openings in the poorer formed.

Designation of Trees

Use this Section to describe the types of trees to be harvested and/or retained if Other (OT) was used for "Designation of Trees" in the Stand Treatment Section on page 4.

Stand No.	Species to be Cut	Size of Trees to be Cut	Quality of Trees to be Cut	% BA/Acre Removed
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Regeneration & Future Condition

Use this Section to describe how Chapter 132 requirements will be met if a non standard system (HG, DL, or OT) was used for the "Type of Cut" in the Cutting Standards Section on page 4.

Stand No.	Source of Regeneration (ex. AD, SE)	How will Regeneration be obtained/protected? If using AD - Describe the species present and how the regeneration will be protected If using SE - Describe the source of the seed and the number of seed trees/acre
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Stand No.	Desired Future Condition Describe what the stand is expected to look like five years from the harvest, including the condition of the overstory & understory
_____	_____
_____	_____
_____	_____
_____	_____

Stand Map Quabbin Lot 1060A

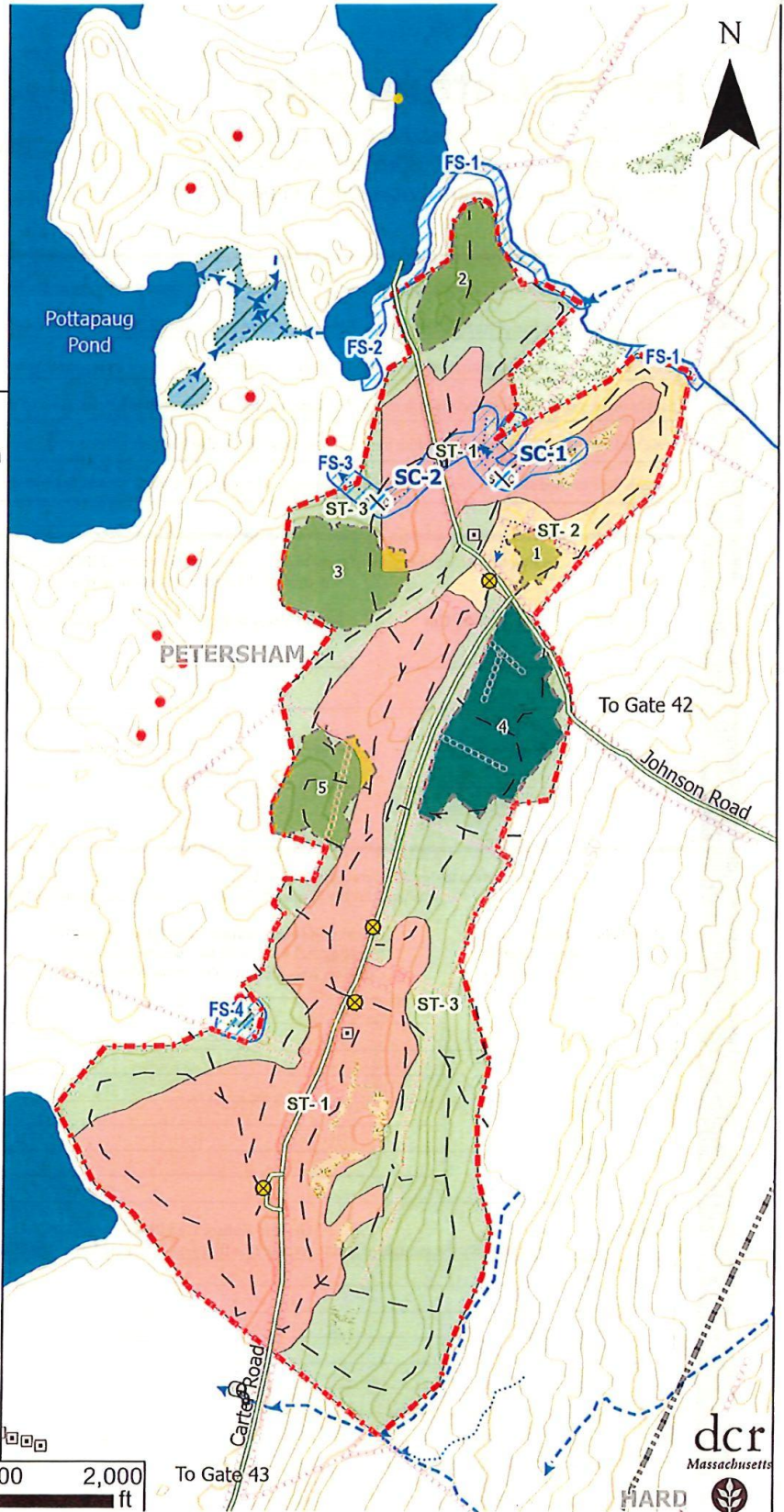
Carter Road
Petersham, MA

Prepared by:
Steven J. Wood
MA DCR DWSP
Quabbin & Ware River Forestry

Scale: 1:7,200
Created: 4/4/2022

Data sources:
MassGIS, DCR, & EOEEA

- Town Boundary
- Quabbin Reservoir Reservation
- Landings
- Forest Road/Trail
- Skid Trails
- Stream Crossing
- Filter Strips
- Culvert
- Stream/River: Perennial
- Stream/River: Intermittent
- Stream/River: Ephemeral
- Swamp/Marsh
- Swamp/Marsh: Wooded
- Reservoir; 43600
- DCR Potential Vernal Pool
- DCR Verified Vernal Pool
- Oak/Hdwd
- Red Pine
- WP/Hardwood
- Harvest boundary
- Group with green retention
- Clear cut with retention
- Stone Walls
- Cultural Resource



Locus Map

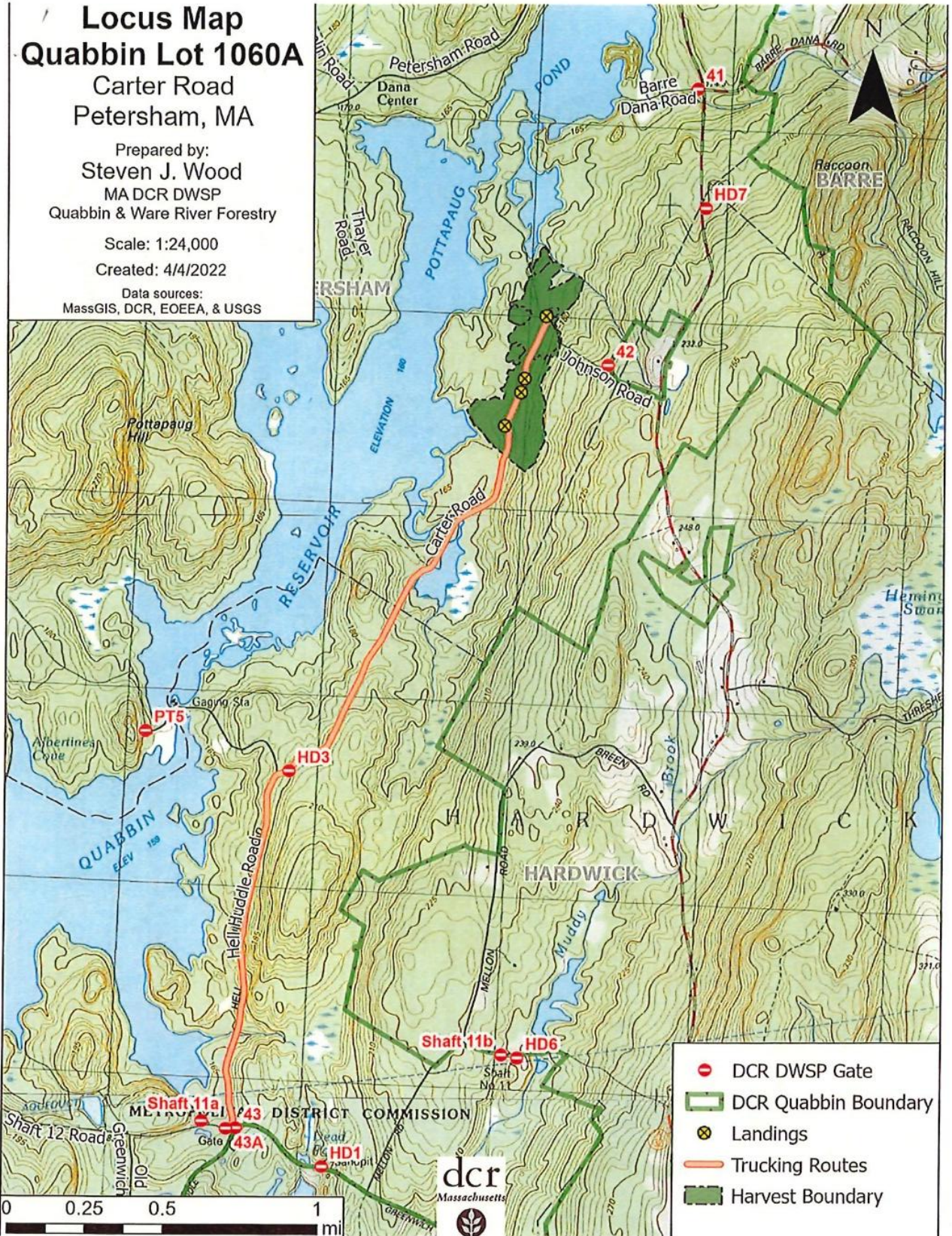
Quabbin Lot 1060A

Carter Road
Petersham, MA

Prepared by:
Steven J. Wood
MA DCR DWSP
Quabbin & Ware River Forestry

Scale: 1:24,000
Created: 4/4/2022

Data sources:
MassGIS, DCR, EOEEA, & USGS



dc_r



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

FILE # 234-33862-22

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-DWSP 485 Ware Rd, Belchertown, MA in accordance with the
(Name of Owner) (Address) 01007

provision of M.G.L. Chapter 132, Section 40-46, filed in Amherst F.O. with the Dept. of Conservation
and Recreation, Division of State Parks and Recreation, a Notice of Intent to cut forest products upon the

Quabbin 1060A lot, Petersham
(Carter Rd)

Approval Date 5/16/22

Director's Agent Andrew Rawcliffe

DCR Phone No. 617-549-1677

ISSUED BY:

Priscilla E. Geigis, Director
Division of State Parks and Recreation