

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

Project Title: Gate 49 Red Pine

DWSP Harvest Permit Number: 1061

DWSP Proposal ID: HA-22-05

DCR Forest Cutting Plan File Number: 309-33941-22

Site Information

Watershed: Quabbin

Town(s): Ware

Acres: 29.3

Nearest Road: Greenwich Plains Road

Natural Heritage Atlas overlap: Yes (no impact)

Public Drinking Water Supply Watershed: Yes

Forest Types: Red pine plantation, white pine with hardwoods, and oak with hardwoods

Area of Critical Environmental Concern (ACEC): No

Soil(s): Well drained thick Canton fine sandy loam.

Wetland Resources: 1 abutting the lot and 1 in the large wetland on east edge of the lot

Vernal Pools: 2 vernal pools and 2 wetlands.

Harvest Information

Harvest Start Date: 8/15/22

Harvest End Date: 9/26/22

Number of Wetland Crossings: None

Number of Stream Crossings: None

Best Management Practices Applied

Stream Crossings: No stream crossings

Filter Strips: No regulated streams in project area, filter strip maintained around the vernal pools

Wetland Crossings: No wetlands crossed

Harvesting in Wetlands: There is no harvesting in wetlands

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

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. These seedlings were planted in areas of old fields/pastures that hadn't fully reverted to forest yet.

The second forest type is white pine with hardwoods. The primary tree species present are white pine and mixed oaks (predominately red oak). Other hardwoods include black and paper birch, red maple, aspen, ash, and hickories. Hemlock occurs in small groups, mainly as suppressed under-story or mid-story trees.

Also, a small section of oak with hardwoods is present in the southwest corner. Red and black oak are most common here, with some white oak and the same associated hardwoods as above.

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. The red pine plantations that were present in several locations here have been declining for over a decade, mainly due to infestation by the non-native red pine scale. Additionally red pine is not a native species of this area.

Adjoining areas of white pine and mixed hardwoods, and an area of oak hardwoods were also treated to encourage more diverse regeneration to become established on these areas as well. A few years after the harvest is completed and new regeneration established, this roughly rectangular 30 acres section will have an uneven-aged structure (with at least 3 age classes) as opposed to the even-aged forest present before this harvest. No other harvests should be needed for another 50 years or so when the whole process can start over again.

Silvicultural Objectives

The goal of this harvest is to build on the success of the work started in 1990 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,

and the resulting young forest will sequester carbon rapidly while maturing into the next stand. As this natural succession progresses habitat for many species will also be created from early successional to late seral stages. With proper management this process can be repeated indefinitely, all the while supplying clean water and air, habitat, carbon sequestration and storage, and the wonderful wood products that society needs, along with many other benefits.

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 2 acres in size, to foster regeneration. Groups were placed according to our guidelines. Areas where there were clusters of trees that were declining or had weak stem form, often due to insects, diseases, or storm damage, were specifically targeted to be cut. Where there were patches of regeneration created from the previous cuts these were often expanded upon by harvesting some of the adjacent over-story or creating a new abutting opening.

Wherever possible wildlife habitat features were maintained and protected, such as snags (dead trees) and trees with large cavities or nests. Exceptional individuals of all species present were retained in the stand for seed and to enhance diversity.

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. This is in keeping with DWSP's standard practice, which dictates that every effort is made to keep existing cultural resources intact. Otherwise, this area has been determined not to be culturally or archeologically sensitive based on a review by the DCR Archaeologist.

Rare or Endangered Species

The lot contains no other critical habitats or known rare or endangered species. The uplands are home to a variety of wildlife including deer, turkey, coyote, bobcat, and moose.

Figures

Figure 1. Final Forest Cutting Plan

06-23-22A10:49 RCVD

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 10/22

For DCR Use Only:

File Number 309-33941-22 Case No.

Date Rec'd 6/23/22 Nat. Hert. Y /

Earliest Start 7/1/22 Nat. Hert. Imp. N

River Basin Chicopee Pub. Dr. Wat. Quabbin

Gen. Obj. LT ACEC

Location

Town Ware Quabbin Lot 1061

Road Greenwich Plains/East Street

Acres 29.3 Proposed Start Date 7/1/2022

Vol. MBF 156.1 Vol. Cds. 106 Vol. Tons 220

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 \$13,000

Licensed Timber Harvester**

Name Tom King

Address 15 Randed Hill Rd

Town, State, Zip Hubbardston, MA 01452

Phone 978-928-4422

Mass. Lic. Harvester # 2023-128

**This information may be supplied after the plan is approved, but before work begins.

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	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

1) Filter stripes are around vernal pools. SJW

2) Site visit 6/24/22. No NHESP impact - see attached letter. Northernmost landing is existing & slopes away from resource area. Jm

Type of Preparer	Type of Crossing	Stabilization	Mitigation	Type of Bottom	Note:
LF Mass. Lic. For.	CU Culvert	SE Seed	FR Frozen	LE Ledge	<small>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.</small>
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	

If Other (OT) is used in any category an explanation must be given on an attached narrative page

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	45.9 M	Red Maple	2.3 M
Red Pine	89.5 M	Sugar Maple	
Pitch Pine		Red Oak	12.3 M
Hemlock		Black Oak	0.9 M
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash	4.1 M	Total Mbf	156.0 M
Beech		Cordwood (Cds)	106 Cds
White Birch		SW Pulp (Tons)	220 T
B & Y Birch	1.0 M	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	RP5	WH4	OH4	
Acres	16.1	9.8	2.9	
Landowner Objective	LT	LT	LT	
Designation of Trees	CT	CT	CT	
Type of Cut	SE	SE	SH	
Source of Regeneration	AD/SE	AD/SE	AD/SE	

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

Determination and Status

Approved	Disapproved	Expires
Cutting Plan <input checked="" type="checkbox"/>	<input type="checkbox"/>	6/23/24
Signature of Service Forester/Director's Agent		Date
Site visit on 6/24/22		6/28/22
Extension	Expires	Ser. For. Ints.
1 <input type="checkbox"/> 2 <input type="checkbox"/>	/	/
Amendment	App 1 Dis 1 App 2 Dis 2	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		

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

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

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 Ware

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.

Cut trees marked with blue paint, some save trees marked with orange and sale boundary is double orange stripe. Note this cutting plan is for west side of East street only. Sale number 1062 is currently being marked on east side and a separate cutting plan will be filed. This is the final harvest of a red pine plantation which has been cut twice before. All the red pine is being cut. Stand 2 the pine hardwoods stand is being treated similarly except scattered small groups of vigorous, well formed white pine and hardwood saw timber will be retained, as will some wildlife and large legacy trees. In both stands small groups of poles and saplings released during previous harvests will be avoided and protected where vigorous.

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
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_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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
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_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Locus Map Quabbin Lot 1061

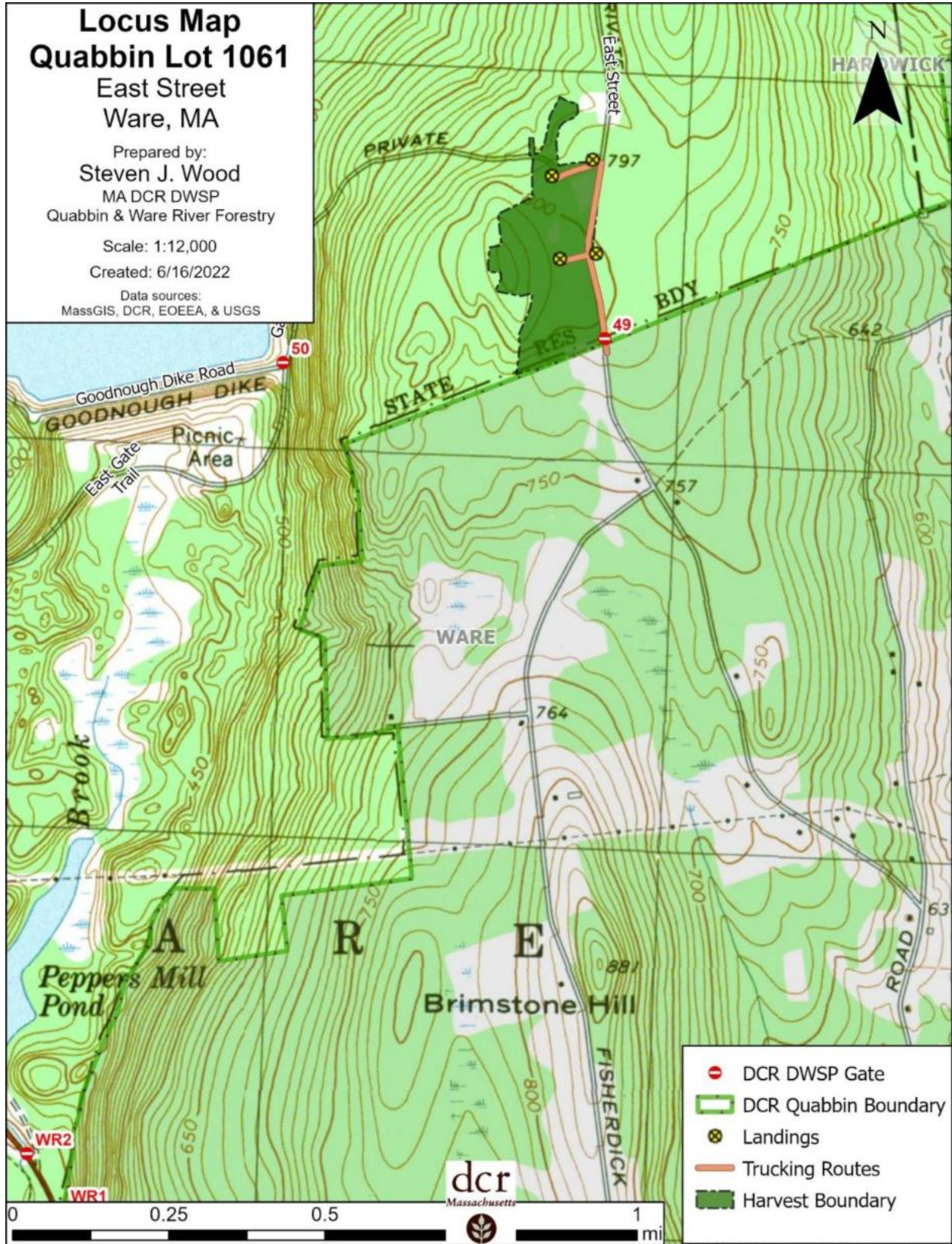
East Street
Ware, MA

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

Scale: 1:12,000

Created: 6/16/2022

Data sources:
MassGIS, DCR, EOEEA, & USGS



Stand Map Quabbin Lot 1061















East St.
Ware, MA

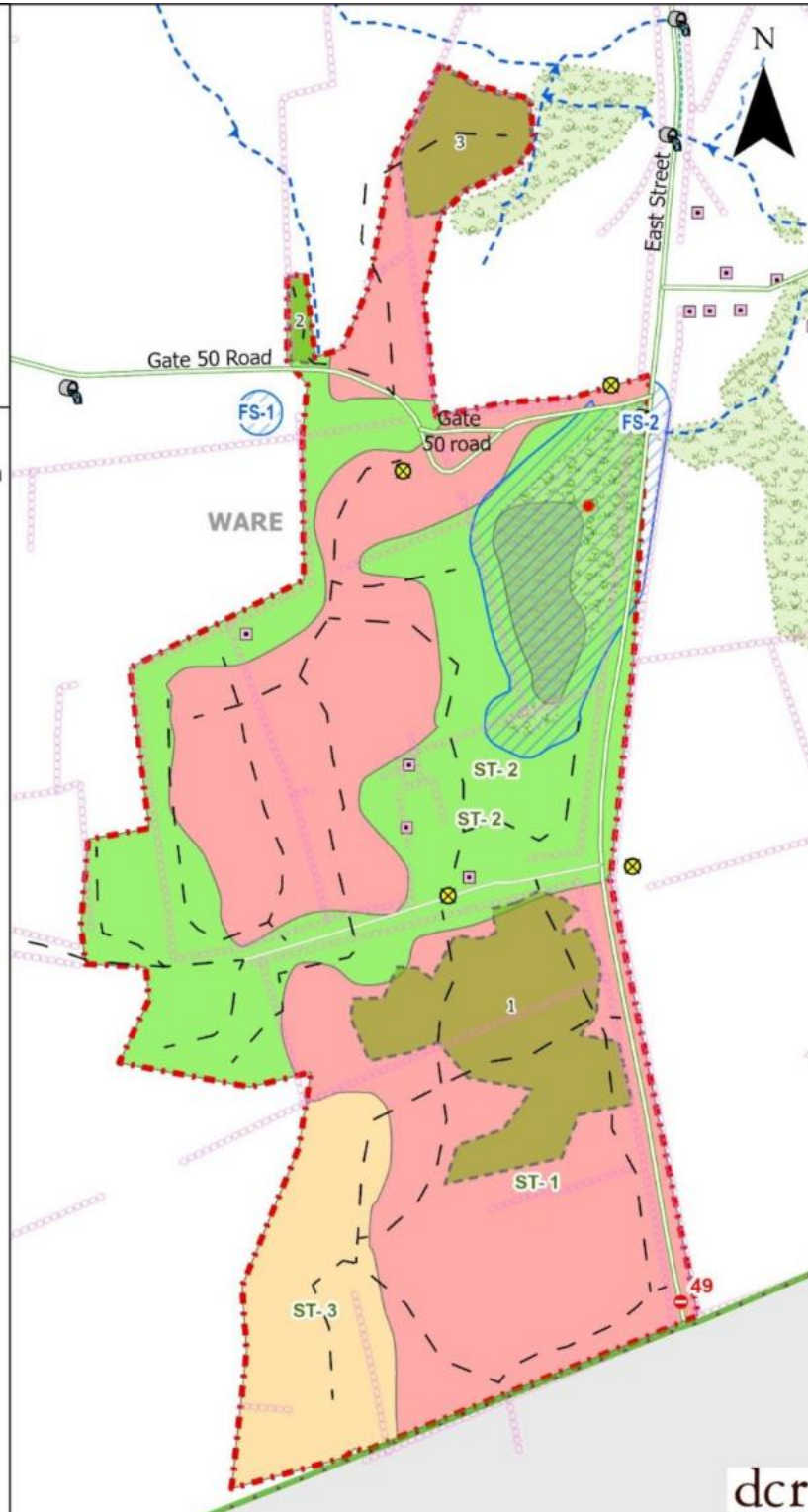
Prepared by:
Steven J. Wood
MA DCR DWSP
Quabbin & Ware River Forestry

Scale: 1:4,000

Created: 6/15/2022

Data sources:
MassGIS, DCR, & EOEEA

-  Town Boundary
-  Quabbin Reservoir Reservation
-  DCR DWSP Gate
-  Landings
-  Forest Road/Trail
-  Other DCR Road
-  Skid Trails
-  Filter Strips
-  Culvert
-  Stream/River: Intermittent
-  Canal/Ditch
-  Swamp/Marsh: Shrub Swamp
-  Swamp/Marsh: Wooded
-  DCR Verified Vernal Pool
-  Oak/Hdwd
-  Red Pine
-  WP/Hardwood
-  Harvest boundary
-  Group with green retention
-  Stone Walls
-  Cultural Resource





**DIVISION OF
FISHERIES & WILDLIFE**

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

Chris Capone
355 West Boylston Street
Clinton, MA 01510

Cutting Plan No. 309.33941.22
NHESP Tracking No. 07-21799(c)
Town Ware
Road Greenwich Plains/East Street
Landowner DCR DWSP
Preparer Steven J. Wood
Date June 27, 2022

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)). Based on details of the Plan and information in our database, the Division does not expect activities proposed in the Plan to negatively impact Estimated Habitat or result in **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 David Paulson at (508) 389-6366 or David.Paulson@mass.gov.

Sincerely,

A handwritten signature in cursive script, reading "Everose Schlüter".

Everose Schlüter, Ph.D.
Assistant Director

Cc: Ware Conservation Commission

MASSWILDLIFE

dc



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

FILE # 309-33941-22

FOREST CUTTING PLAN CERTIFICATE

W

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 Lot 1061 lot.
(Greenwich Plains/East St)

Approval Date 6/28/22

Director's Agent Jacob Macko

DCR Phone No. 857-202-2824

ISSUED BY:

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