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

Forest Management Project Summary

Project Title: Goodnough Dike Oak Woodlands Restoration
DWSP Harvest Permit Number: 1064
DWSP Proposal ID: HA-22-04
DCR Forest Cutting Plan File Number:

Site Information
Watershed: Quabbin
Town(s): Ware
Acres: 25.4
Nearest Road: Goodnough Dike Road
Natural Heritage Atlas overlap?: Yes
Public Drinking Water Supply Watershed?: Yes
Forest Types: White pine / oak
ACEC?: No
Soils: Well drained to excessively well drained Charlton-Hollis-Rock outcrop complex to Hinckley loamy sand.
Wetland Resources: none
Vernal Pools: none

Harvest Information
Harvest Start Date: 3/5/2025
Harvest End Date: 7/11/2025
Number of Wetland Crossings: none
Number of Stream Crossings: none

Best Management Practices Applied
Stream Crossings: none
Filter Strips: none. Road and drainage infrastructure drains away from the reservoir and off watershed preventing any possible sedimentation from reaching the reservoir.
Wetland Crossings: non
Harvesting in Wetlands: none

DWSP Forester supervising this harvest
Name: Richard Graham MacLean | Doug Hutcheson
Forester License #: 467 | 375
Phone #: 857-263-0211
Email: richard.maclean@mass.gov

Narrative

General Description/Forest Composition/History

The forest here is primarily northern red oak / eastern white pine with minor components of black, scarlet, and white oak, and red maple in the canopy. The midstory is dominated by generalist tree species such as white pine, black birch, and red maple, along with remnant American chestnut. The site is on dry, well-draining soils, and the understory presence of abundant blueberry and huckleberry indicates that it was likely a more open woodland/heathland in the recent past. The only DWSP management history since the reservoir was established is a 1985 thinning, likely in response to spongy moth related mortality after a large outbreak in 1984.

Site Selection

This site has the soil and vegetation to support known state- listed species that require an open oak woodland forest habitat. Certain known uncommon and rare plant and animal species thrive in a forest of oak trees which are more widely spaced than that of a dense, closed canopy forest. This type of forest is known as an oak woodland. By managing this site for an open oak woodland DWSP can further diversify the entire watershed forest by supporting this locally uncommon habitat type.

Silvicultural Objectives

To accomplish the goal of an open oak woodland with a heath understory capable of supporting the known state listed species, DWSP will manage this site with harvest and prescribed fire. Starting with the harvest, DWSP will be removing generalist species such as eastern white pine, red maple, black and paper birch, and reducing the total number of canopy oaks to achieve the open, intermittent canopy characteristic of this habitat type. Once the harvest is accomplished, DWSP Natural Resources professionals will monitor the response of the understory vegetation and within four growing seasons prescribed fire will be applied to the site. The prescribed fire will help reduce the regeneration of generalist species and favor oak regeneration capable of replacing future canopy oak mortality. The uncommon and rare species that thrive in a woodland evolved with, and are commonly part of, fire adapted communities. Returning fire here will help encourage new plant growth and release nutrients, supporting these rare species that depend on the openness of an oak woodland. By reducing the leaf litter and allowing sunlight to reach the ground, seeds that have been waiting in the soil, sometimes for more than 50 years, will grow.

Cultural Resources

There is a short length of stone wall within the harvest boundaries but no other known cultural features. The wall will be protected during harvest and only existing barways will be utilized.

Rare or Endangered Species

The Natural Heritage and Endangered Species Program, in coordination with DWSP Natural Resources is aware of and actively monitoring multiple state listed species at the site. This monitoring will continue post harvest and will inform current and future management.

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: 3/15/16) Final (9/25)

For DCR Use Only:

File Number	309-429440-25	Case No.	N/A
Date Rec'd	8/29/24	Nat. Hert.	Y / Imp Y
Earliest Start	9/16/24	Pub. Dr. Wat.	Quabbin
River Basin	Chicopee	ACEC	No
Gen. Obj.	LT		

Site Information

Location

Town: Ware (Quabbin Lot 1064)
Road: Goodnough Dike Road
Acres: 24.5 Proposed Start Date: TBD
Vol. MBF: 88.2 Vol. Cds.: 61 Vol. Tons: 78

Plan Preparer

Name: Richard G MacLean | Doug Hutcheson
Address: 485 Ware Road
Town, State, Zip: Belchertown, MA 01007
Phone: (857) 263-0211
Type of Preparer: LF
*Mass. Forester License #: 467 | 375
*Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name: MA DCR Div of Water Supply Protection
Mailing Address: 485 Ware Road
Town, State, Zip: Belchertown, MA 01007
Phone: 4133237221
Ch61☐ 61A☐ 61B☐ Stew☐ *Case #
FSC☐ CR☐ CR Holder

Licensed Timber Harvester**

Name: Kyle C. Anderson
Address: 12 Woods Road
Town, State, Zip: Westminster, MA 01473
Phone: 978-265-3799
Mass. Lic. Harvester #: 2025-1580
**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)				

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

Required actions before work can begin - see NHESP determination letter. Oak mortality present throughout harvest area.

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	75.5	Red Maple	.5
Red Pine	3.3	Sugar Maple	
Pitch Pine		Red Oak	7.1
Hemlock		Black Oak	1.1
Spruce		White Oak	.7
Other Sftwd.		Other Hdwd.	
White Ash		**Total Mbf**	88.2
Beech		**Cordwood (Cds)**	61
White Birch		**SW Pulp (Tons)**	78
B & Y Birch		**HW Pulp (Tons)**	
Black Cherry		**Chips (Tons)**	

*Note: Volumes 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	WO			
Acres	24.5			
Landowner Objective	LT			
Designation of Trees	CT			
Type of Cut	OT			
Source of Regeneration	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 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: 8/29/2024

Service Forester

Determination and Status

	Approved	Disapproved	Expires
Cutting Plan	☑	☐	8/29/26

Signature of Service Forester/Director's Agent — Date: 9/27/24

Extension 1☐ 2☐ — Expires / — Ser. For. Ints. /

Amendment — App 1 ☐ Dis 1 ☐ App 2 ☐ Dis 2 ☐ /

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: 9/11/25

Codes

Forest Types

WP	White Pine	HK	Hemlock	OM	Mixed Oak
WK	WP/Hem	HH	Hem/Hdwd	RM	Red Maple
WH	WP/Hdwd	BC	Blck Cherry	BE	Beech
WO	WP/Oak	BB	Bee/Bir/Map	SF	Spruce/Fir
RP	Red Pine	OH	Oak/Hdwd	SM	Sugar Maple
SR	Red Spruce	OR	N Red Oak	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 **(Effective Date: 3/15/16)**
Use this page to provide further explanation or if
Other (OT) was used in any category on pages 3 or 4.

Landowner MA DCR DWSP
Town Ware
File Number 309.42940.25

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.

This treatment is intended to restore a previous oak-woodland condition to further diversify the structure of the watershed forest, and to support at least four known state listed species dependent on that habitat. Harvest will target removal of generalist species such as white pine, red maple, and black birch, as well as reduce the average basal area to an average 40 square feet per acre (ranging 20-90 due to spongey moth related mortality and terrain). To further promote fire adapted species, prescribed fire will be applied to the site several growing seasons after harvest, and then conditions will be maintained with prescribed fire over a longer interval. Cut trees are designated in blue, retained trees are butt marked in orange. The road and drainage infrastructure separates the harvest area from the reservoir to the north and prevents any possible sedimentation that could occur during harvesting.

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. Additional narrative description may be added on a separate page.

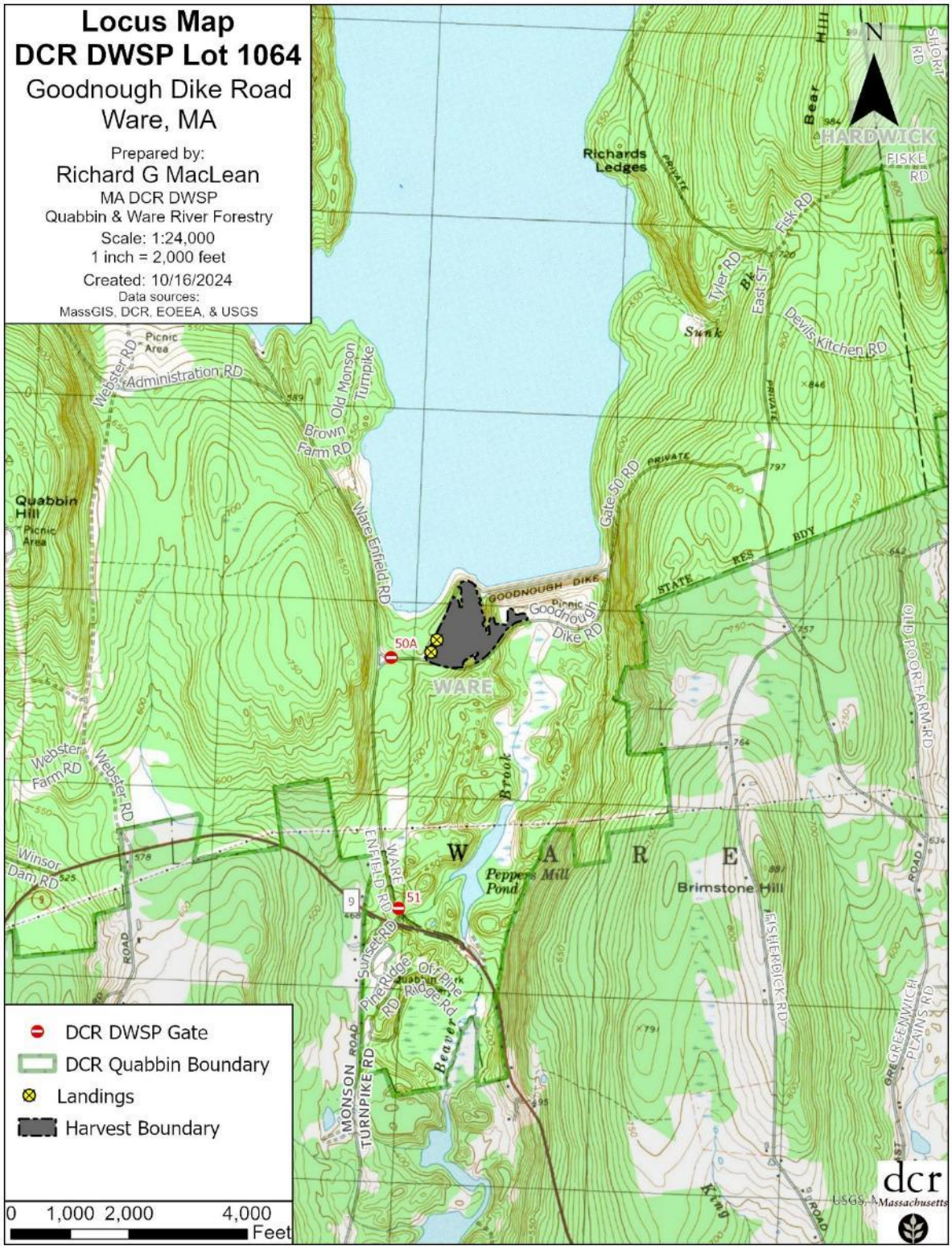
	Describe Trees to be Cut			Describe Trees to be Left			% BA/AC	
Stand No.	Species	Size	Quality	Species	Size	Quality	Cut	Left
1	WP	saw/pulp	poor-good	RO	saw/cord	good	22	78
1	RO	saw/cord	poor-good	BO	saw/cord	good	15	85
1	BO	saw/cord	poor-good	WO	saw/cord	good	14	86
1	WO	saw/cord	poor-good					
1	RP	saw/pulp	poor-good					

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
1	AD	Loggers will be instructed to protect advanced regen of 'desireable' species (oaks, hickories). Advanced red, black and white oak is present; seedlings of each oak species are also present.

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
1	This treatment is intended to restore a previous oak-woodland condition. Prescribed fire will follow the harvest to further select for fire adapted species in the under and mid story.


Locus Map
DCR DWSP Lot 1064
Goodnough Dike Road
Ware, MA
Prepared by:
Richard G MacLean
MA DCR DWSP
Quabbin & Ware River Forestry
Scale: 1:24,000
1 inch = 2,000 feet
Created: 10/16/2024
Data sources:
MassGIS, DCR, EOEEA, & USGS
N
Richards Ledges
HARDWICK
FISKE RD
Fisk RD
Tyler RD
East ST
Devils Kitchen RD
Picnic Area
Webster RD
Administration RD
Old Monson Turnpike
Brown Farm RD
Ware Enfield RD
Quabbin Hill
Picnic Area
Gate 50 RD
PRIVATE
STATE RES BDY
GOODNOUGH DIKE
Goodnough Dike RD
50A
WARE
OLD POOR FARM RD
Webster Farm RD
Webster RD
Winsor Dam RD
ROAD
WARE ENFIELD RD
51
Sunset RD
Pine Ridge RD
Oak Pine Ridge Rd
Beaver Brook
Peppers Mill Pond
Brimstone Hill
FISHERDICK RD
GREENWICH PLAINS RD
MONSON TURNPIKE RD
DCR DWSP Gate
DCR Quabbin Boundary
Landings
Harvest Boundary
0 1,000 2,000 4,000
Feet
dcr
Massachusetts

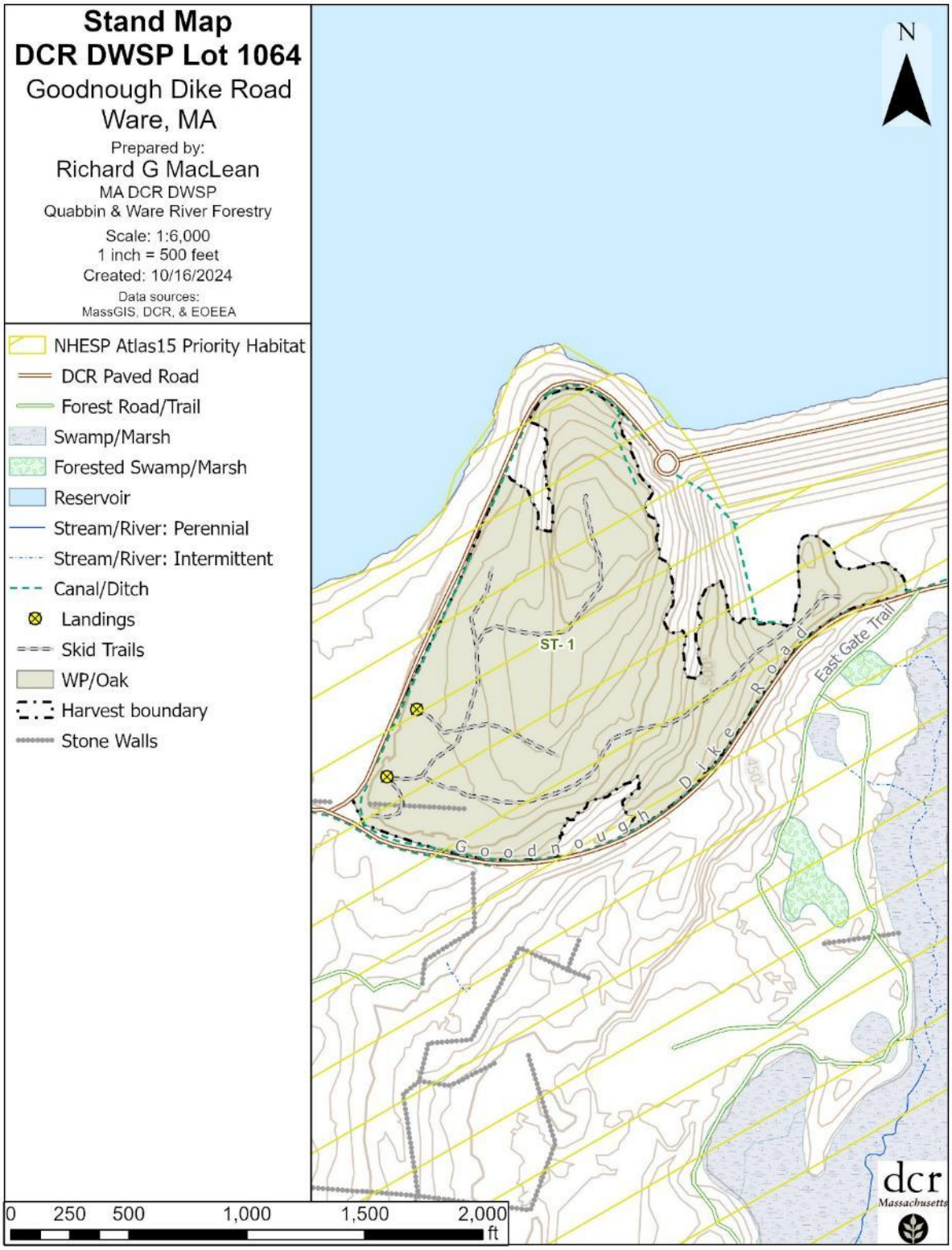
Stand Map
DCR DWSP Lot 1064

Goodnough Dike Road
Ware, MA

Prepared by:
Richard G MacLean
MA DCR DWSP
Quabbin & Ware River Forestry

Scale: 1:6,000
1 inch = 500 feet
Created: 10/16/2024

Data sources:
MassGIS, DCR, & EOEEA



dcr

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

FILE # 309-42940-24

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

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 1064 lot, Ware

Approval Date 9/27/24

Director's Agent Jacob Macko

DCR Phone No. (857) 202-2824

ISSUED BY:

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

Figure 2a. Photo Point 1, Pre harvest, 10/2024

Figure2b. Photo Point 1, immediately post harvest, 8/2025

Figure 3a. Photo Point 2, Pre harvest, 10/11/2024

Figure 3b. Photo Point 2, immediately post-harvest, 8/2025

Figure 4a. Photo Point 3, Pre harvest, 10/11/2024

Figure 4b. Photo Point 3, immediately post-harvest, 8/2025