Massachusetts Department of Conservation and Recreation

Division of Water Supply Protection, Office of Watershed Management

Forest Management Project Summary

Project Title: Slashwall

DWSP Harvest Permit Number: 4404
DCR Forest Cutting Plan File Number: 222-32279-21

Site Information

Watershed: Ware River Watershed	**Town(s)**: Oakham
Acres: 33.3	**Nearest Road:** Loop Rd off of Coldbrook Rd
Natural Heritage Atlas overlap?: No	**Public Drinking Water Supply Watershed?:** Yes
Forest Types: White Pine/Oak	**ACEC**[1]**?:** No
Soils: 927C - Montauk-Scituate-Canton association - moderately well drained	
Wetland Resources: Two streams and associated wetlands are adjacent to the harvest area.	
Vernal Pools present or within 200 feet of harvest : No	

Harvest Information

Harvest Start Date: 5/17/21	**Harvest End Date:** Before 7/8/21
Number of Wetland Crossings: None	**Number of Stream Crossings:** None

Best Management Practices Applied

Stream Crossings	There are no stream crossings.
Filter Strips	There is no harvesting in a filter strip.
Wetland Crossings	There are no wetland crossings.
Harvesting in Wetlands	There is no harvesting in wetlands.

DWSP Forester supervising this harvest
Name: Ken Canfield
Forester License # 431
Phone #: 857-274-7090
Email: kenneth.canfield@mass.gov

[1]ACEC: Area of Critical Environmental Concern

NARRATIVE

General Description/Forest Composition/History:

The harvest area is located in the town of Oakham on Loop Rd off of Coldbrook Rd. It consists of a white pine/oak stand.

Tree species present in the overstory are white pine, red, black, and white oaks, red maple, paper birch, yellow birch, black cherry, white ash, shagbark hickory, and eastern hemlock. The understory consists of eastern white pine, black birch, red maple, red, black, and white oak, eastern hemlock and black cherry.

Glossy buckthorn is present but is not well established. Some invasive shrubs were hand-pulled during the marking of this lot. Harvesting trees in patches puts enough sunlight on the ground to create conditions that will help native tree species out-compete invasive shrubs over time.

The soils are moderately well drained.

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. A healthy and resilient forest is comprised of diverse native tree and shrub species and multiple age classes of trees.

This area was chosen because it is a good site for an experimental slash wall to be built. There is enough low quality wood to put in the wall and enough good quality wood to pay for the construction.

Silvicultural Objectives:

This harvest is part of a regional study on the effectiveness of building slashwalls to control herbivory. Research in other states has shown that this can be an effective method of controlling herbivory of native vegetation. Researchers from the Connecticut Agricultural Experiment Station want to establish sites in New England states to continue evaluating this method. A slashwall will be constructed around the unit that is south of the transmission lines. All deer and moose will be driven from the enclosure prior to completion of the wall. Dr. Jeff Ward from the Connecticut Station has established and measured pre-harvest vegetation plots in both units. The plots will be remeasured yearly to compare vegetation composition and herbivory with and without a slashwall. The silviculture and size of harvest units has been chosen in part to maintain consistency with other study sites. The construction of slashwalls appears to be more cost effective on units larger than 10 acres due to the smaller ratio of perimeter to acreage.

This harvest will also create early successional habitat that will be utilized by many wildlife and plant species. This habitat will complement the existing early successional habitat corridor under the transmission lines. The large woody debris in the slashwall will provide abundant habitat for many small mammal and invertebrate species. Although the slashwall is intended to minimize the impacts of moose and deer on half of the project, the lack of herbivory should benefit grasses, forbs and shrubs that are preferred by deer and moose and increase the diversity of vegetation that is established.

This harvest will result in a fully regenerated stand that will be free to grow for the foreseeable future. Approximately 7 square feet of basal area per acre of dominant, well formed, vigorous oaks and white

pines were left for seed and structure. With existing regeneration, sprouts, and seedlings to be established there should be ample regeneration within a few years. No further silvicultural entries will be required for decades, which will allow skid trails to heal and will reduce any potential environmental impacts.

Cultural Resources:

Standard practice dictates that every effort is made to avoid disturbing stone walls and other cultural resources.

Wildlife/Rare or Endangered Species:

Natural Heritage Endangered Species Program (NHESP) does not show any rare habitat within the harvest area.

FIGURES

Figure 1 Final Forest Cutting Plan

Figure 1 Final 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)

For DCR Use Only:
File Number 222-32279-21 Case No. ✓
Date Rec'd 3-26-2021 Nat. Hert. NO
Earliest Start 3-15-2021 Pub. Dr. Wat. WARE RIVER INTAKE
River Basin CHICOPEE ACEC NO
Gen. Obj. LT

FINAL

Site Information

Location

Town Oakham
Road Loop Rd off of Coldbrook Rd
Acres 33.3 Proposed Start Date 4/21
Vol. MBF 208.8 Vol. Cds. 510 Vol. Tons 491

Plan Preparer

Name Kenneth W. Canfield
Address 578 Old Turnpike Rd
Town, State, Zip Oakham, MA 01068
Phone (857) 274-7090
Type of Preparer LF
*Mass. Forester License # 431
*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☐ 61A☐ 61B☐ Stew☐ *Case #
FSC☐ CR☐ CR Holder

Licensed Timber Harvester**

Name S + N LOGGING
Address 247 ZERAH FISKE RD
Town, State, Zip SHERBURNE MA 01370
Phone (413) 824 - 0413
Mass. Lic. Harvester # 2021 : 1835
**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

* Plan REVIEWED UNDER SNOW CONDITIONS
* 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	94.3 Mbf	Red Maple	3.5 Mbf
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	78.9 Mbf
Hemlock	1.8 Mbf	Black Oak	9.7 Mbf
Spruce		White Oak	16.7 Mbf
Other Sftwd.		Other Hdwd.	3.1 Mbf
White Ash	0.1 Mbf	**Total Mbf**	208.8
Beech		**Cordwood (Cds)**	510
White Birch		**SW Pulp (Tons)**	
B & Y Birch	0.4 Mbf	**HW Pulp (Tons)**	
Black Cherry	0.3 Mbf	**Chips (Tons)**	491

*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	WO		
Acres	28.2	5.1		
Landowner Objective	LT	LT		
Designation of Trees	CT	CT	CT	
Type of Cut	CC	CT		
Source of Regeneration	SE	SE	SE	

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.

Dan Clark Digitally signed by Dan Clark Date: 2021.02.26 06:00:36 -05'00'

Signature of landowner(s) — 2/26/2021 Date

Service Forester

Determination and Status #222-32279-21

	Approved	Disapproved	Expires
Cutting Plan	☒	☐	2·26·2023

Signature of Service Forester/Director's Agent — 3·12·2021 Date

For Chris Carone

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

	App 1	Dis 1	App 2	Die 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 — 1/11/22 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 Hor.

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 DCR - DWSP

Town Oakham

File Number 222-32279-21

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.

Part of the purpose of this harvest is to study the effectiveness of building a slashwall around a harvest to limit deer and moose access and herbivory. Stand 1 is comprised of 2 clearcuts. A 14.2 acre clearcut located south of the transmission lines and a 14.0 acre clearcut on the north side of the transmission lines, along Loop Rd. A 10 ft tall, 20 ft wide slashwall will be constructed during harvesting operations around the perimeter of the southern unit using woody material from that unit and from stand 2. Approximately 7 square feet of basal area per acre of well formed, vigorous, dominant oak and white pine stems will be retained in both clearcuts for seed and structure. Stand 2 is 5 acres of thinning around the southern unit in a 100 ft wide band around the edge of where the slash wall will be built. Low grade material will be harvested to be added to the slashwall.

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

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

MA DCR DWSP #222-32279-24

Lot 4404 Slashwall

Loop Rd in Oakham FCP

Stand 1 Narrative:

The harvest in stand 1 consists of two clearcuts that are each 14 acres in size in a white pine/oak stand. The clearcuts are located on either side of a National Grid transmission line right of way. The harvest will have the following benefits:

This harvest is part of a regional study on the effectiveness of building slashwalls to control herbivory. Research in other states has shown that this can be an effective method of controlling herbivory of native vegetation. Researchers from the Connecticut Agricultural Experiment Station want to establish sites in New England states to continue evaluating this method. A slashwall will be constructed around the unit that is south of the transmission lines. All deer and moose will be driven from the enclosure prior to completion of the wall. Dr. Jeff Ward from the Connecticut Station has established and measured pre-harvest vegetation plots in both units. The plots will be remeasured yearly to compare vegetation composition and herbivory with and without a slashwall. The silviculture and size of harvest units has been chosen in part to maintain consistency with other study sites. The construction of slashwalls appears to be more cost effective on units larger than 10 acres due to the smaller ratio of perimeter to acreage.

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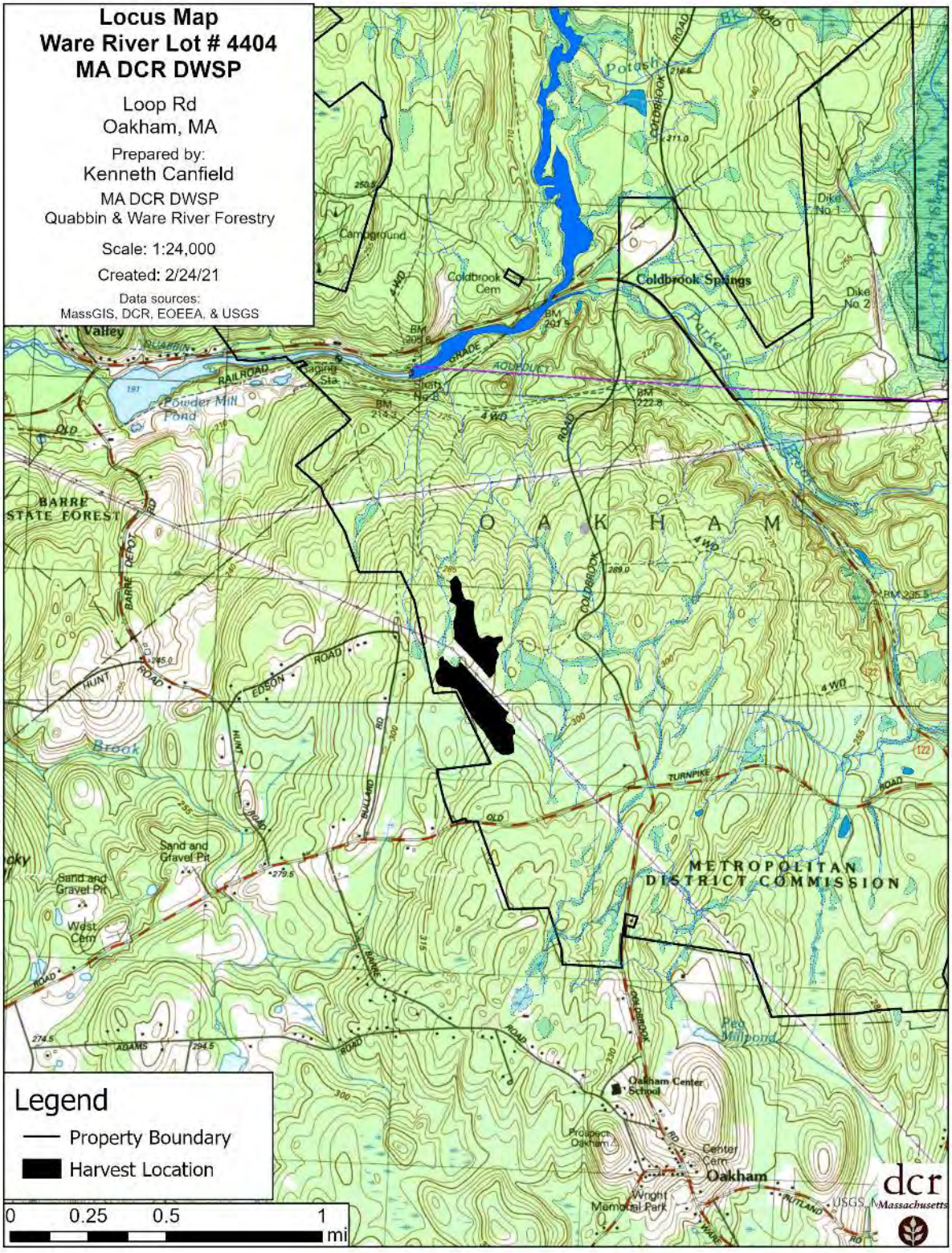
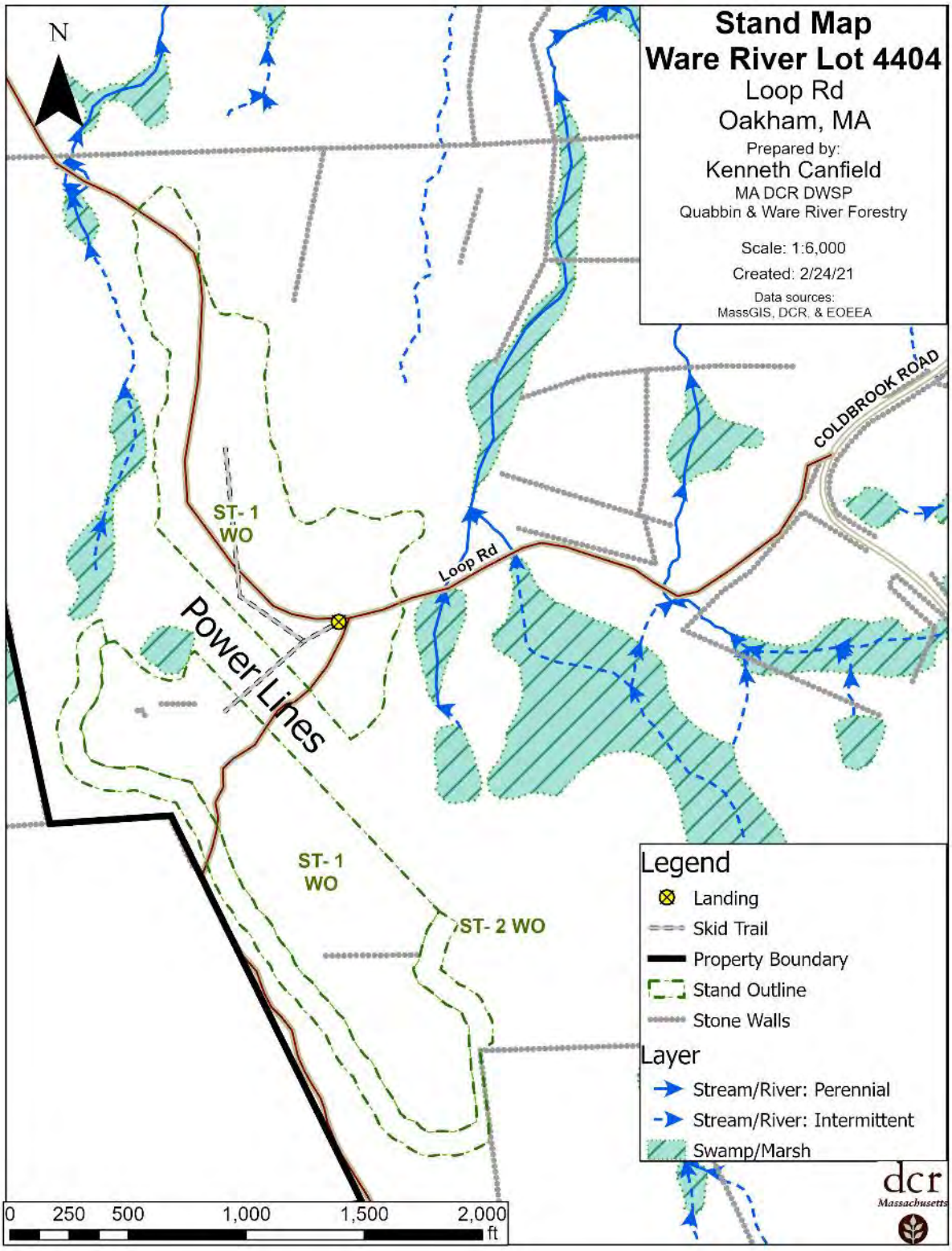

Locus Map
Ware River Lot # 4404
MA DCR DWSP
Loop Rd
Oakham, MA
Prepared by:
Kenneth Canfield
MA DCR DWSP
Quabbin & Ware River Forestry
Scale: 1:24,000
Created: 2/24/21
Data sources:
MassGIS, DCR, EOEEA, & USGS
Legend
Property Boundary
Harvest Location
0 0.25 0.5 1 mi
BARRE STATE FOREST
OAKHAM
METROPOLITAN DISTRICT COMMISSION
Coldbrook Springs
Coldbrook Cem
Campground
Powder Mill Pond
Sand and Gravel Pit
Sand and Gravel Pit
West Cem
Oakham Center School
Center Cem
Oakham
Wright Memorial Park
Prospect Oakham
Peq Millpond
Dike No 1
Dike No 2
dcr
Massachusetts


N
Stand Map
Ware River Lot 4404
Loop Rd
Oakham, MA
Prepared by:
Kenneth Canfield
MA DCR DWSP
Quabbin & Ware River Forestry
Scale: 1:6,000
Created: 2/24/21
Data sources:
MassGIS, DCR, & EOEEA
COLDBROOK ROAD
Loop Rd
ST- 1
WO
Power Lines
ST- 1
WO
ST- 2 WO
Legend
Landing
Skid Trail
Property Boundary
Stand Outline
Stone Walls
Layer
Stream/River: Perennial
Stream/River: Intermittent
Swamp/Marsh
0 250 500 1,000 1,500 2,000
ft
dcr
Massachusetts

dcr

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

FILE # 222-3227A-21

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 (Name of Owner) BELCHERTOWN (Address) in accordance with the provision of M.G.L. Chapter 132, Section 40-46, filed in CLINTON with the Dept. of Conservation and Recreation, Division of State Parks and Recreation, a Notice of Intent to cut forest products upon the LOOP lot.

Approval Date 3·12·2021

Director's Agent CHRIS CAPONE

DCR Phone No. 857·406·0175

ISSUED BY:

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