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

Project Title: Coldbrook Rd Gypsy Moth Salvage

DWSP Harvest Permit Number: S3WR
DCR Forest Cutting Plan File Number: 021-9502-19

Site Information

Watershed: Ware River Watershed	Town(s): Barre
Acres: 15.2	Nearest Road: Coldbrook Rd
Natural Heritage Atlas overlap?: No	Public Drinking Water Supply Watershed?: Yes
Forest Types: Mixed Oak	ACEC ¹ ?: No
Soils: 910C Woodbridge-Paxton association, 902E Charlton	on-Paxton association
Wetland Resources: Several seasonal streams and a wetland	nd are near the harvest area.
Vernal Pools present or within 200 feet of harvest : Yes within 200 feet of the edge of the harvest.	- 2 vernal pools present outside of the harvest area, but

Harvest Information

Harvest Start Date: 11/7/18	Harvest End Date: 2/14/19
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 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 #: 508-882-3636 X 1603
Email: kenneth.canfield@state.ma.us

¹ACEC: Area of Critical Environmental Concern

NARRATIVE

General Description/Forest Composition/History:

The harvest area is located east of Coldbrook Rd and north of Reuben Walker Rd in Barre. This oak stand was last thinned in 1995. Recent defoliation by Gypsy Moth caterpillars has left many trees dead or dying. Diverse natural regeneration is abundant throughout the stand.

Tree species present are red, black, scarlet, and white oak, red maple, hickory, eastern white pine, red pine, hemlock, black cherry, sugar maple, and quaking aspen.

Invasive shrubs, particularly glossy buckthorn, are present. 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 soil is 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 of the patches of oak trees that have been recently killed by gypsy moth caterpillars. A combination of stress from a multi-year drought along with repeated extreme gypsy moth defoliation events has resulted in widespread oak mortality throughout the Quabbin and Ware River forests. The degree of damage varies from place to place, but there are unfortunately some significant areas with near complete mortality. While a large amount of the dead oak will remain in place to add to wildlife habitat and forest structural diversity, DWSP intends to temporarily shift its forest management focus to harvesting in areas of significant oak mortality. These areas would have otherwise been harvested through normal practices many years from now.

Silvicultural Objectives:

Salvage dead and dying oak stems, particularly where they occur in groups. Also remove low quality/vigor trees within those groups. There are three patches that are 2.6, 3.2, and 3.4 acres in size. There is also approximately 6 acres adjacent to the patches where the mortality is more sporadic where the salvage will resemble a thinning. The diverse natural regeneration that exists in the area will be released.

Cultural Resources:

Standard practice dictates that every effort is made to avoid disturbing stone walls and other cultural resources. One minor stonewall will have to be breached to establish a landing on Coldbrook Rd.

Wildlife/Rare or Endangered Species:

Two vernal pools are present adjacent to the harvest area. They will be buffered and protected.

FIGURES

Figure 1 Final Forest Cutting Plan

Location					Landowner
Town Barre					Name DCR Division of Water Supply Protection
Road Coldbrook Rd			_		Mailing Address 485 Ware Rd
Acres 15	Propo	osed Start	Date 9/1	/18	
Vol. MBF 83.1 Vol	l. Cds.	111	ol. Tons		Town, State, Zip Belchertown, MA 01007
					Phone (413) 323 - 6921
Plan Preparer					Ch61 61A 61B Stew *Case #
					FSC CR CR Holder
Name Kenneth W. Ca	anfield				Licenced Timber Harvester**
Address 578 Old Turnp	oike Rd				Licensed Timber Harvester**
					Name TBA PIRNER LOGGE
Town, State, Zip Oakh		01068			Address 152 WILLIAMSUILLE ROAD
SUBMOTION AND A CONTRACTOR OF A	82-3636				Town, State, Zip HUBBARDSTON, MA OIL Phone (978) 270-9916
Type of Preparer LF					Phone (978) 270'-9916 Mass. Lic. Harvester # 2019-587 (MUL
*Mass. Forester License	# 431				
*Required for land unde Stream Crossing		h61A or l	orest St	ewardship	**This information may be supplied after the plan is approved, be work begins. Harvesting in Wetlands
*Required for land unde Stream Crossing Indicate location on map		h61A or l SC-2	SC-3	SC-4	Work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3
*Required for land unde Stream Crossing Indicate location on map Type of Crossing	IS				Harvesting in Wetlands
*Required for land unde Stream Crossing Indicate location on map Type of Crossing Existing Structure	IS				work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2) Acres to be Harvested Resid. Basal Area
*Required for land unde Stream Crossing Indicate location on map Type of Crossing	IS				work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2)
*Required for land under Stream Crossing Indicate location on map Type of Crossing Existing Structure Type of Bottom	IS				work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2) Acres to be Harvested Resid. Basal Area
*Required for land under Stream Crossing Indicate location on map Type of Crossing Existing Structure Type of Bottom Bank Height (ft) Stabilization	SC-1				work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2)
*Required for land under Stream Crossing Indicate location on map Type of Crossing Existing Structure Type of Bottom Bank Height (fl)	SC-1				work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2) Acres to be Harvested Resid. Basal Area
*Required for land under Stream Crossing Indicate location on map Type of Crossing Existing Structure Type of Bottom Bank Height (ft) Stabilization	SC-1				work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2)
*Required for land under Stream Crossing Indicate location on map Type of Crossing Existing Structure Type of Bottom Bank Height (fl) Stabilization Wetland Crossing	SC-1	SC-2	SC-3	SC-4	work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2)
*Required for land under Stream Crossing Indicate location on map Type of Crossing Existing Structure Type of Bottom Bank Height (ft) Stabilization Wetland Crossing Indicate location on map	SC-1	SC-2	SC-3	SC-4	work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2)
*Required for land under Stream Crossing Indicate location on map Type of Crossing Existing Structure Type of Bottom Bank Height (ft) Stabilization Wetland Crossing Indicate location on map Length of Crossing	SC-1	SC-2	SC-3	SC-4	work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2) Acres to be Harvested Acres to be Harvested Acres to be Harvested Resid. Basal Area (>50%?) Acrest Comments Service Forester Comments MEASE NODELOCB SERVICE
*Required for land under Stream Crossing Indicate location on map Type of Crossing Existing Structure Type of Bottom Bank Height (ft) Stabilization Wetland Crossing Indicate location on map Length of Crossing Mitigation	SC-1	SC-2	SC-3	SC-4	work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2)
*Required for land under Stream Crossing Indicate location on map Type of Crossing Existing Structure Type of Bottom Bank Height (fl) Stabilization Wetland Crossing Indicate location on map Length of Crossing Mitigation Stabilization Filter Strips	gs	WC-2	SC-3 WC-3	SC-4	work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2)
*Required for land under Stream Crossing Indicate location on map Type of Crossing Existing Structure Type of Bottom Bank Height (ft) Stabilization Wetland Crossing Indicate location on map Length of Crossing Mitigation Stabilization	SC-1	SC-2	SC-3	SC-4	work begins. Harvesting in Wetlands Indicate location on map HW-1 HW-2 HW-3 Forest Type (see pg 2)

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Products to be Harvested*

Species	Mbf/Cds	· · · · ·	Mbf/Cds
White Pine		Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	60.7
Hemlock		Black Oak	21.6
Spruce		White Oak	0.8
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	83.1
Beech		Cordwood (Cds)	111
White Birch		SW Pulp (Tons)	
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.

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Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	OM	OM		
Acres	9.2	6		
Landowner Objective	LT	LT		
Designation of Trees	CT	CT		
Type of Cut	SA	SA		
Source of Regeneration	SE	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 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.

De	etermin	atior	n and St	atus	021	-9	502-19	Fi	nal Repo	rt a	ind Commei	nts	
Sig	ting Plan	Approv	w K.C. 2	83	8	Dat	31/18	and	all relevant st	atutes	e afore described Fo s have been substan A prester/Director's A	ntially c	
Am	endment	Ő											

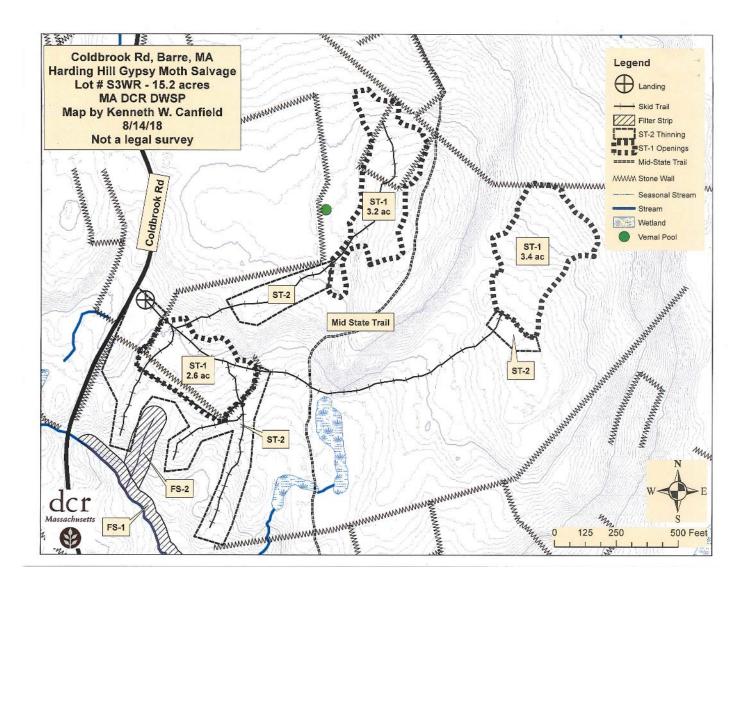
Forest Cutting Plan

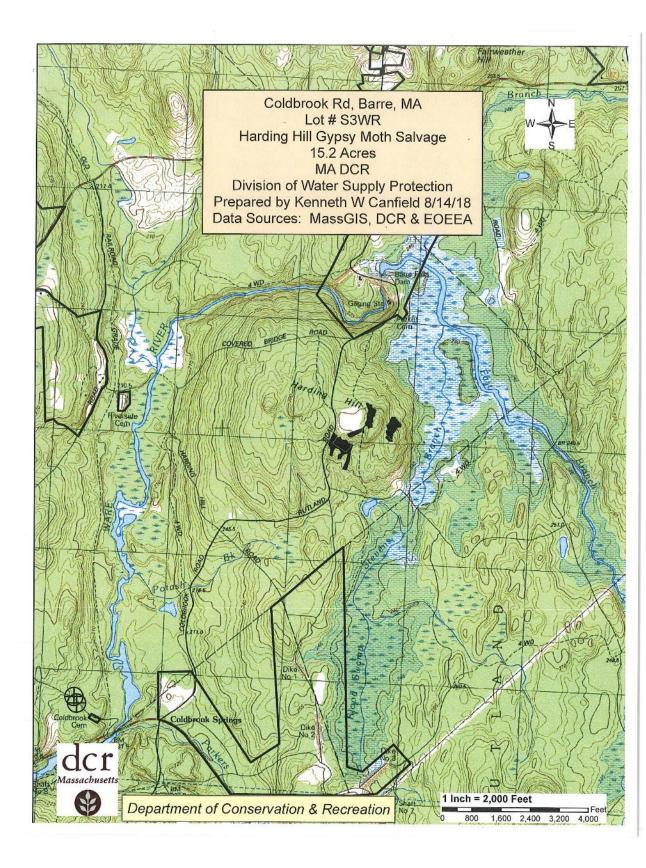
Narrative Page (Effective Date: 3/15/16) Use this page to provide further explanation or if Other (OT) was used in any category on pages 3 or 4.

Landowner	DCR - DWSP
Town	Barre
File Number	621-9502-19

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 is a salvage harvest of dead and dying oak caused by a gypsy moth infestation. ST-1 consists of 3 openings that are 2.6, 3.4, and Ps BM 3.2 acres (see stand map) in size. ST-2 consists of thinning areas adjacent to the openings and along skid trails. rees 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. esignation of Describe Trees to be Cut Describe Trees to be Left % BA/AC Cut Left Stand No. Species Size Quality Species Quality Size 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. 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. Source of Regeneration & Future Condition Regeneration (ex. AD, SE) 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

pg 5 of 5





dcr	COMMONWEALTH OF MASSAC Department of Conservation and Re Division of State Parks and Recreatio	creation	le # <u>021-9502 - 19</u>
FORE	ST CUTTING PLAN	CERTIFICATE	W
	a conspicuous place within the area in which	485 WARE	ROAD
	a conspicuous place within the area in which DCR is that <u>Division of Water Supply</u> Retern (Name of Owner)	485 WARE	ROAD
This certifie	DCR	485 WARE BELOVERTOWN (Address)	ROAD in accordance with the
This certifies provision of and Recreat	DCR s that <u>Division of Water Survey Protect</u> (Name of Owner) f M.G.L. Chapter 132, Section 40-46, filed in _ tion, Division of State Parks and Recreation, a	HIS WARE BELOVERTOWN (Address) CLINITON	ROADin accordance with thewith the Dept. of Conservation
This certifies provision of and Recreat <u>OLD BROOK</u> Approval Da	DCR is that Division of Water Supply Protect (Name of Owner) f M.G.L. Chapter 132, Section 40-46, filed in _	HIS WARE BELOVERTOWN (Address) CLINITON	ROAD in accordance with the with the Dept. of Conservation products upon the