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

### **Project Title**

DWSP Harvest Permit Number: 1048 DWSP Proposal ID: HA-16-RP DCR Forest Cutting Plan File Number: 309-8111-16

### Site Information

Watershed: Quabbin Town(s): Ware Acres: 12 Nearest Road: Quabbin Park East entrance Natural Heritage Atlas overlap: No Public Drinking Water Supply Watershed: Yes Forest Types: Red pine and mixed pine, oak and hardwood. Area of Critical Environmental Concern (ACEC): No Soils: Scituate and Canton fine sandy loams, extremely stony Wetland Resources: One stream crossing to access north landing. Vernal Pools: No

#### Harvest Information

Harvest Start Date: 4/26/2016 Harvest End Date: 5/13/2016 Number of Wetland Crossings: 0 Number of Stream Crossings: 1

### Best Management Practices Applied

Stream Crossings: There is one stream crossing where a portable bridge will be used. Filter Strips: Variable width filter strip used. Wetland Crossings: There are no wetland crossings. Harvesting in Wetlands: There is no harvesting in wetlands.

### DWSP Forester supervising this harvest

Name: Steven Wood Forester License number: 257 Phone number: 413-323-6921 ext. 156 Email: Steven.Wood@state.ma.us

### Narrative

#### General Description/Forest Composition/History

The area to be harvested is in the town of Ware. The stone walls on this lot attest to its history of clearing for agriculture, mostly for pasture. When the farmland was abandoned, probably in the late 19<sup>th</sup> or early 20<sup>th</sup> century, it reverted to forest. The 2 areas with red pine were planted around 1940.

The primary tree species present are red pine and white pine. There is also an area of mixed oak hardwood and pine. The hardwoods present include red, black and white oak, black and paper birch, red maple, ash, and hickories.

The red pine is starting to decline. It became infected with an exotic insect pest, red pine scale, around 2012. The scale can kill a tree in just a couple of years. Secondary pathogens have also come in including borers and root rot. The area to the west of this harvest was heavily infested with gypsy moth in 2015 and many egg masses are present in this stand currently so it is expected that the hardwoods will be defoliated later this spring. Fortunately, it usually takes 3 total defoliations for mortality to occur in the hardwoods. There are several naturally occurring agents that have become established that usually cause the gypsy moth population to crash before multiple successive years of defoliation occur.

Past harvests here include a firewood thinning completed in 1986 and a group selection harvest of some of the red pine in the stand along the road completed in 2007.

The soils on this lot are Scituate fine sandy loam and Canton fine sandy loam, both extremely stony. These are loamy glacial till soils underlain by sandy till on glaciated plains and hills. They range from moderately well drained (Scituate) to well drained (Canton).

#### 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 both small and large scale disturbances such as diseases, insect infestations, ice storms and hurricanes.

#### Silvicultural Objectives

The goal of this harvest is to build on the success of the work started in 1986 and 2007 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 groups, up to 3.6 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. These vulnerable trees will be replaced with vigorous new seedlings, or with saplings where there is existing regeneration to be released. Where groups of regeneration created from the previous cut were present, they were expanded upon by creating a new abutting group.

Wherever possible wildlife habitat features were maintained and protected, such as snags (dead trees) and trees with cavities or nests.

#### **Cultural Resources**

Stone walls are numerous throughout this area. There are many breaks and barways in these walls and they can easily be used to avoid and 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 stone walls intact. There are several cellar holes near the harvest, and they will be avoided. There is also a well on the edge of the main stand; it's flagged and will be protected. 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 critical habitats or known rare or endangered species, and no vernal pools. The area is home to a variety of wildlife including deer, turkey, coyote and bobcat. Figures

Figure 1. Final Forest Cutting Plan

Figure 2. Pre-Harvest Photographs, Points 1-3 taken on 4/20/16

*Figure 3. Post-Harvest Photographs, Points 1-3 taken on 8/8/16* 

Figure 4. One Growing Season Post-Harvest Photographs, Points 1-3 taken on 8/1/17

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dcr         COMMONWEALTH OF MASSACHU           Department of Conservation and Recre         Division of State Parks and Recreation	ISETTS FILE # <u>309.8111.16</u> ation
FOREST CUTTING PLAN C	ERTIFICATE
Post this in a conspicuous place within the area in which the This certifies that DCR-DWSP 485 (Name of Owner)	harvesting operation is to take place. Ware Rd, Belchertown in accordance with the
provision of M.G.L. Chapter 132, Section 40-46, filed in	Mherst F.O. with the Dept. of Conservation
and Recreation. Division of State Parks and Recreation, a Noi	tice of Intent to cut forest products upon the
Approval Date 3/11/16 Was	ISSUED BY: Park This
Director's Agent Doug Hutcheson	CARACTER DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTÓRIA DE LA CONTRACTÓRIA DE LA CONTRACTÓRIA DE LA CONTRA

# Figure 2: Pre-Harvest Photographs Points 1-3 taken on 4/20/16



## Point 2.



Eastern edge of main stand, note declining overstory pines and established white pine regeneration.





# *Figure 3. Post-Harvest Photographs, Points 1-3 taken on 8/8/16*









*Figure 4.* One Growing Season Post-Harvest Photographs, Points 1-3 taken on 8/1/17





