Massachusetts Department of Conservation and Recreation
Bureau of Forest Fire Control and Forestry
Forest Management Proposal
Name: Willis Road South

Date Posted: June 30, 2021
End of Comment Period: August 14, 2021

Region:	**Central**
Recreation District:	**Central Highlands**
Forest Management District:	**Mid State**
State Forest:	**Lawton State Forest**
Closest Road:	**Townsend Road & Willis Road**
Town	**Athol, Massachusetts**

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Overview

Lawton State Forest consists of 365 acres and is located in Athol, Massachusetts. Access is from Willis Road, Townsend Road and Chestnut Hill Avenue. The property consists of two separate acquisitions. The first parcel was purchased in 1986 from the Lawton family and the last purchase was in 2001. The Lawton tract was owned by the Lawton family for over 200 years before the state took ownership. The acquisition was made possible in large part by the assistance of the Mount Grace Land Conservation Trust. The property was utilized as a dairy farm until the early 1900's. Beginning in the 1930's as a fundraiser for a Boy Scout project, the family began planting Christmas trees, primarily spruce (*Picea spp*.) and fir (*Abies spp*.) species, throughout the open fields on the property. Additional plantings included red pine (*Pinus resinosa*), eastern white pine (*Pinus strobus*), Scots pine (*Pinus sylvestris*) and Norway spruce (*Picea abies).* From 1950-1990, the family sold commercial Christmas trees and lumber sourced from the property. It was the first tree farm to enter the American Tree Farm system in Massachusetts and the second in all the United States.

This project is being proposed at this time to explore a collaboration with the University of Massachusetts-Amherst to both study the interaction between vegetative diversity, forest management, and forest carbon stocks and flux; and engage in outreach on those interactions with the public and practitioners of forest management. All necessary permits will be secured as needed for this research, including DCR Research Permits.

Project Area Descriptions

Stand Information

While portions of the property were planted to a mixture of the species listed above, much of the proposed 108.8 acre project area contains a native even-aged forest stand of a white pine-oak-eastern hemlock type. The stand is structurally uniform, containing mature trees that are in stable condition. Forest health threats are minimal at this time. Elongate hemlock scale (*Fiorinia externa)*, hemlock woolly adelgid *(Adelges tsugae),* and gypsy moth *(Lymantria dispar*) are present but are currently not problematic. There is a small inclusion of a red pine, white pine and Norway spruce plantation along Willis Road.

The dominant overstory species include red oak (*Quercus rubra),* eastern hemlock (*Tsuga canadensis),* and eastern white pine. Other species include black oak (*Quercus velutina),* red maple (*Acer rubrum*), red pine, and Norway spruce, among other mixed hardwood species. The condition of the overstory is fair to good. It is comprised of mature trees with a moderately high stocking. Red pine quality is poor due to growth stagnation and what is assumed to be red pine scale (*Matsucoccus matsumurae).* An entry in 2006 harvested 58 thousand board feet (MBF) of red pine, eastern hemlock, white pine, and Norway spruce sawtimber in addition to firewood and softwood pulp in a thinning. The majority of this work was done nearest to Willis Road.

If needed, more detailed stand types will be delineated based on the results of a site-specific forest stand exam to be conducted during the prescription development process. This initial inventory will be designed in collaboration with staff from the University of Massachusetts – Amherst.

Aesthetic, Recreation, Wetlands, Cultural, Rare Species, and Wildlife Considerations

Aesthetic

All aesthetic considerations will be made to legal recreational users of the state forest. As mentioned in the DCR Management Guidelines for roads and trails, hazard trees will be harvested along the truck roads and skid trails. Harvester operation will be limited to times when ground conditions are stable. Directional felling to protect residual trees, wetland resource areas, woods roads, and trails will also be implemented.

Recreation

There are hiking trails and interior woods roads (previously farm roads) throughout the proposed area. Hiking, mountain biking, cross country skiing, snowshoeing, and hunting, among others, are potential uses of this state forest. Hiking and hunting are the primary uses of the proposed area. Fishing is common in the small ponds on the north side of Willis Road. The project area will be closed to the public during active harvesting hours for safety purposes. Hazard trees will be harvested within close proximity to roads and trails.

Wetland Resources

There is a perennial stream, wetlands, intermittent streams, and several wet seeps located within the proposed project area. In conjunction with the forest stand exam, all wetland resource areas will be mapped and delineated in the field. All Forestry Best Management Practices (BMPs) will be implemented within the project area. There will be no harvesting in wetlands.

Cultural Resources

There are many stone walls throughout this project area. These walls and any other cultural resource areas (stone piles, wells, etc.) will be mapped and brought to the attention of the DCR Archeologist for further review.

Rare and Endangered Species
A review of the Natural Heritage and Endangered Species Program (NHESP) atlas shows that there is no mapped Estimated or Priority habitat or certified vernal pools located within the project area. NHESP will review the project prior to any harvesting to determine if any limitations or modifications will be required.

Wildlife
There are signs of several large and small mammal species utilizing this area as well as many bird species. Deer browse is not problematic for regeneration currently. As outlined in the DCR Management Guidelines, selected large trees will be reserved as wildlife trees. Snags, dead trees, and coarse woody debris (CWD) will be retained for habitat also. Browse for wildlife will be enhanced during the harvest and for many years after the harvest as regeneration becomes established. Mast-producing trees such as oak will be retained whenever possible.

Sale Layout and Harvesting Limitations
Sale layout will be developed using BMPs to minimize negative effects on the site. Any equipment limitations will be made based on the wood products to be harvested. This determination will be made while field work is being conducted for writing the silvicultural prescription.

One existing landing on the western side of the perennial stream on Willis Road will be re-utilized. It is likely that a new landing will need to be established on the eastern side of the perennial stream on either Willis Road or Townsend Road. All pre-existing skid trails and roads were well planned, remain in stable condition, and will be utilized for this project. Secondary skid trails will be established when necessary to access the project area.

All wetland resource areas will be delineated in the field with paint to ensure no harvesting occurs in them. Filter strips will be delineated similarly around streams. Planning efforts will attempt to minimize the need or use for wetland and/or stream crossings. Buffer strips will be left along Townsend and Willis Road.

Skid trails will be properly stabilized to prevent erosion and sedimentation with the use of water bars, hay bale installation, slash or otherwise, where necessary. Roads and trails used within the project area will be regraded and stabilized. Access by ORVs will be restricted by additional access blockages.

Silviculture
The proposed project area will be treated with the uneven-aged group selection method. Areas between the groups will be treated with variable-retention thinning. Group sizes will vary but are not to exceed one acre in size. Commissioner approval will be sought for this project since it will create openings larger than one-third of an acre. The desired future condition of this stand is an uneven-aged forest stand with a diverse mix of native species as well as increased forest complexity and structure over time from this and subsequent entries. The amount of light that will reach the

forest floor by using group selection and variable-retention thinning will create the growing conditions to support the growth of a variety of tree species. This includes shade intolerant species such as cherry and birch, mid-shade tolerant species such as oak and pine, and shade tolerant species such as hemlock. The groups selected for removal will be located based on many factors, including proximity to high-quality seed trees, patches of less-desirable or poorer-quality trees, and presence of advance regeneration from previous disturbances. Variable-retention thinning will focus on the removal of trees with poor vigor and growth habit amongst all size classes. This will provide better growing conditions for the retained trees into the future. In these ways, this treatment will fulfill the goals of maintaining diverse and resilient forests as outlined in the "DCR Management Guidelines" document as well as furthering DCR's mission of collaboration and outreach.

Regeneration and residual stand monitoring will be conducted in the future before another entry is scheduled. The intent is to let this stand develop into an uneven-aged stand by repeating this type of treatment in future entries. The number, size, and location of future group openings will be dependent on the presence of regeneration, the condition of the residual stand, and other natural factors that might compliment the presence of new group openings, such as pockets of natural disturbances.

References:

Commonwealth of Massachusetts. Department of Conservation and Recreation. Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines. March 2012.

District Forester: _____ **Date:** 6/15/21
Joelle Vautour

Field Operation Team Leader
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Brad Gallant

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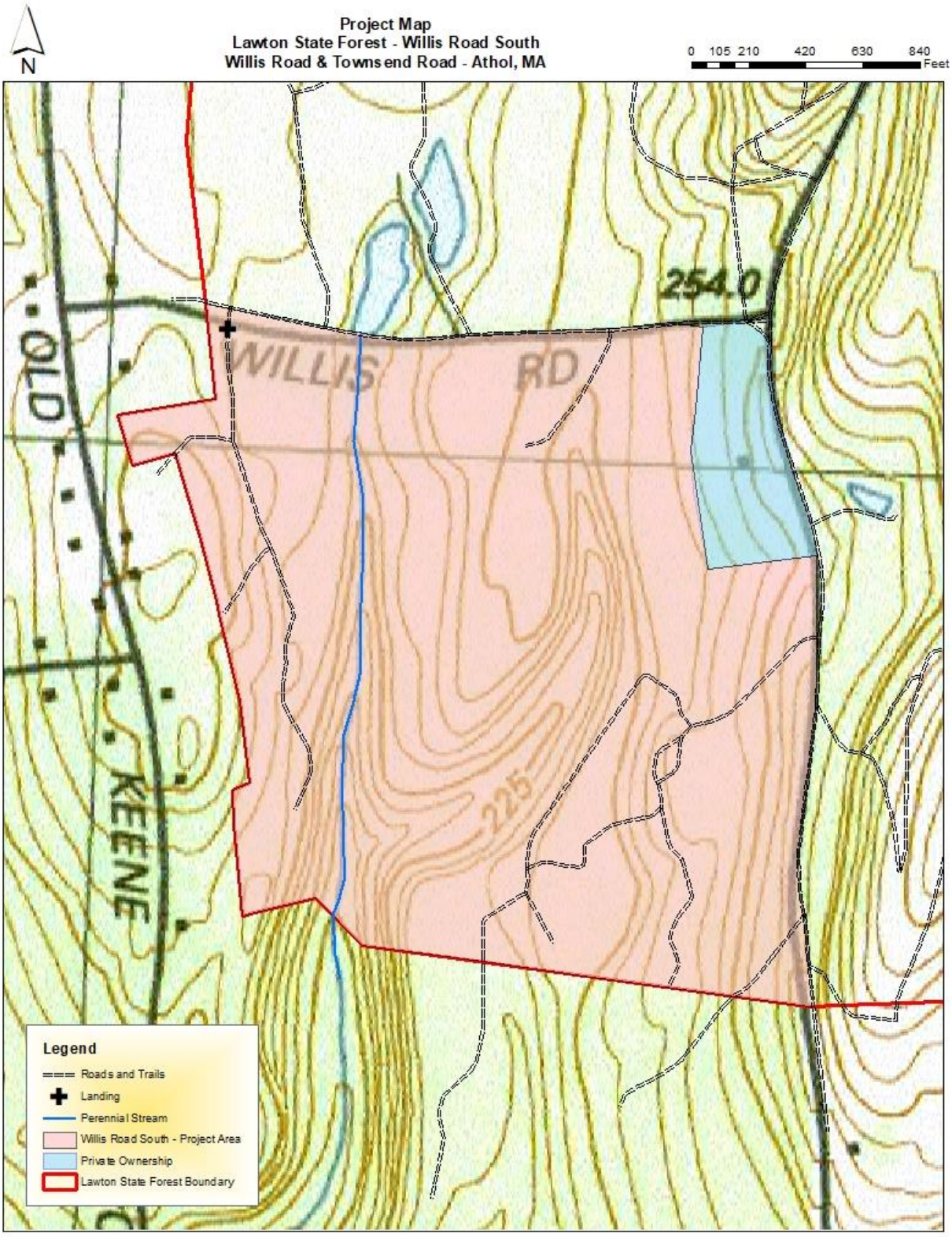
Jennifer Stowe

Management Forestry
Program Supervisor: _____ **Date:** 6/16/21

Attached: Topographic map showing project details. Locus map showing project location within regional context.

Project Map
Lawton State Forest - Willis Road South
Willis Road & Townsend Road - Athol, MA



Map Prepared By: Joelle Vautour, DCR Forester - February 5, 2021

Locus Map
Lawton State Forest - Willis Road South
Willis Road & Townsend Road - Athol, MA

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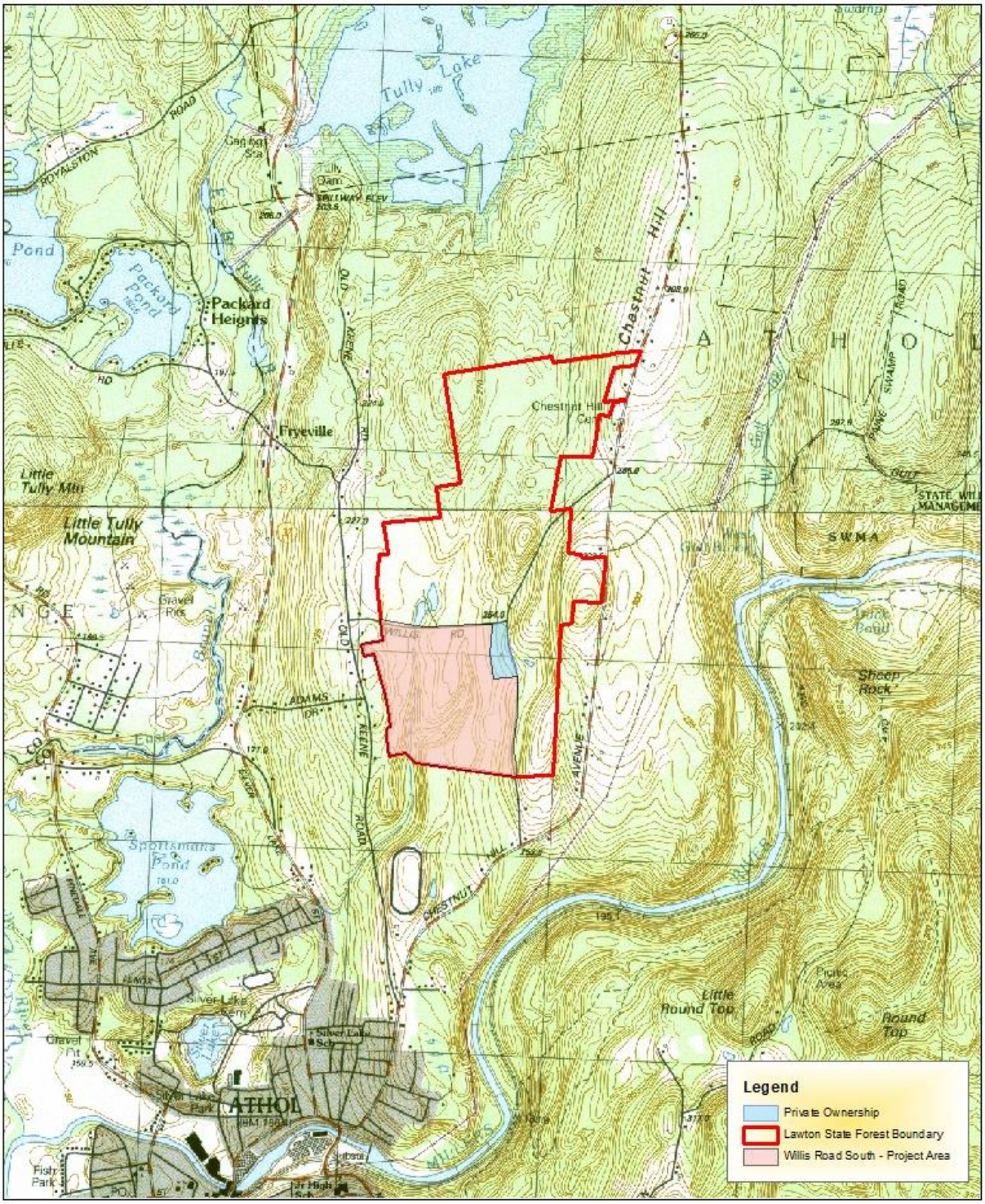
0 500 1,000 2,000 3,000 4,000 Feet



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