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

Site Information

Proposal Summary Item	Item Information/Description
Lot Proposal ID	**WA-19-95**
Fiscal Year	2019
Watershed	**Wachusett**
Town(s)	**West Boylston**
Acres	39
Nearest Road	Malden Street
Natural Heritage Atlas overlap?	No
Public Drinking Water Supply Watershed?:	Yes
Forest Types	Oak hardwoods, white pine
Soils	Hinckley and Merrimac excessively drained soils.
Wetland Resources	Malden brook flows through near the eastern bound of the working unit. In the northern section is a classic seep.
Vernal Pools	There is one very large vernal pool with a stadium like topography surrounding it.

NARRATIVES

General Description/Forest Composition/History:

This working unit was part of the original takings and most of it was previously owned by Aaron Goodale and George Newton. All of it was mapped as woodland in 1900 with exception to one small chunk of pasture in the northern section. The northern section was planted and planted-improved to white pine in 1905. The eastern half of the northern section was planted again to white pine in the spring of 1907 in a 6' x 6' layout. The western half was a chestnut and oak stand which was thinned in 1909. The 1938 Hurricane assessment map shows scattering damage in the northern section and along the southern portion of Malden Brook with no subsequent removals. The property was covertyped in 1951 to white pine in the northern section and a little section along the southern portion of Malden Brook was covertyped as mixed. There has only been one timber sale on this working unit which occurred in 1983 in the northern section and was a part of a sale to the north. The total impact was a thinning in the white pine stand covering only 8 acres. The result of that work shows a good hardwood regeneration mix of black birch, red maple, sugar maple and hickory. There is crown damage on the oaks, possibly ice storm damage and the crowns are rebuilding. Red oak and white pine are of good quality along with some white oak. White ash seems of good vigor. Beech scale was found in this working unit. Witchhazel in the lower elevations of this working unit are a minor issue, while the higher elevations have good regen.

Regeneration sampling found good regeneration is present on 32% of 63 plots taken and those were fairly well spread out in the working unit. Marginal regeneration is present on an additional 18% of the plots and no regeneration was identified on 21% of the plots taken although more than half the marginal plots and just under half the no regeneration plots have oak regeneration present. Regeneration is lacking in 10% of the plots due to native interferring plants (witchhazel) and they were found primarily in the little valley in the center of the working unit. The regeneration is made up of white pine, american beech, white oak, sugar maple, black birch, bigtooth aspen, red oak, white ash and red maple.

Site Selection:

The ideal watershed protection forest is one which best serves the function of the land as a producer of high quality drinking water in both short- and long-term. This forest must be vigorous and diverse in tree species and ages, be actively accumulating biomass and actively regenerating. Such a forest will be ideally suited to be resilient to and quickly recover from small- and large-scale disturbances such as

diseases, insect infestations, ice storms and hurricanes. This site was selected because of the lack of age diversity both in these 39 acres as well as in the 481 DCR-owned acres from which water flows into Malden Brook and ultimately into the Wachusett Reservoir. This harvest will contribute as much as 13 acres or 33% of young forest towards the ideal protection forest which would have at least 3 distinct age classes of trees distributed throughout this sale area.

Silvicultural Objectives:

Because there is good advanced regeneration spread throughout this working unit, openings will be made accordingly in order to release the advance regeneration. Given that ~80% of the working unit is at a mature age class and none of the working unit is under twenty years old, 13 acres of openings will occur. After the harvest is complete, the result will be closer to the watersheds ultimate goal of having three distinct age cohorts within each working unit. The species composition will be different in the white pine stand where hardwoods are regenerating, but similar in the other white pine/hardwood stands. Care will be taken to avoid unnecessary release or encouragement of the American beech which is located in small pockets in the working unit. The operation will focus on creating openings where they are suitable to the topography and have good regeneration.

Cultural Resources:

This area will be assessed by the DCR Archeologist for both known sites of cultural or archeological importance as well as for potential use by pre-Contact Native Americans.

Wildlife/Rare or Endangered Species:

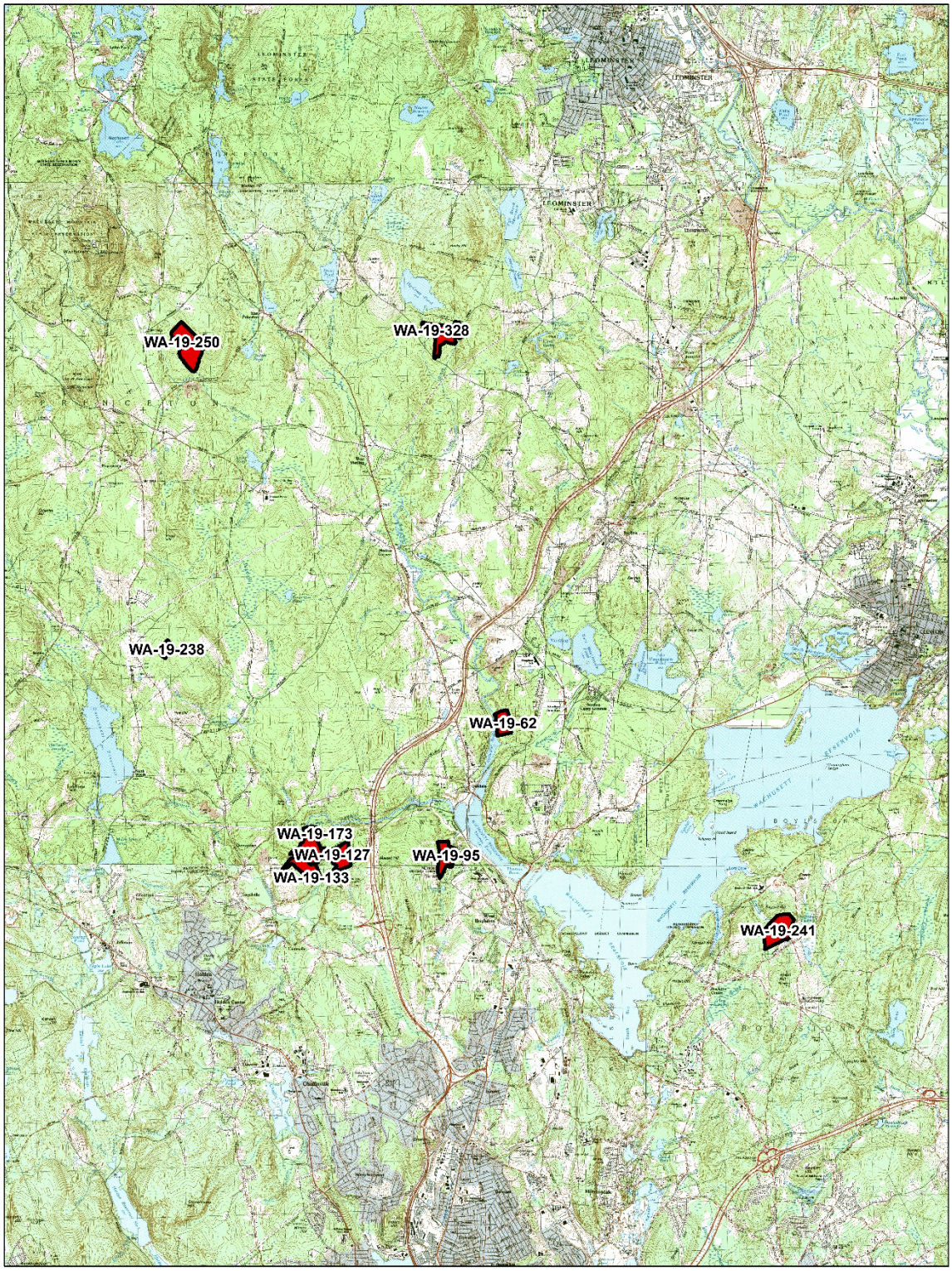
All DWSP Best Management Practices for wildlife management such as the protection and enhancement of wildlife habitat features will be an integral part of the silviculture and job layout. Diverse hard and soft mast species will be retained and the healthiest trees will be released to improve seed production, which will promote tree seedlings and food for wildlife. Large snags, den trees, logs and nest trees will be retained whenever possible as valuable habitat. No stick nests were observed, but if they are identified in the further steps of this process they will be protected. Where they occur; streams, wetlands, seeps and vernal pools will be protected for water quality and wildlife habitat.

All vernal pools, whether verified or potential, will be protected using the appropriate Best Management Practices.

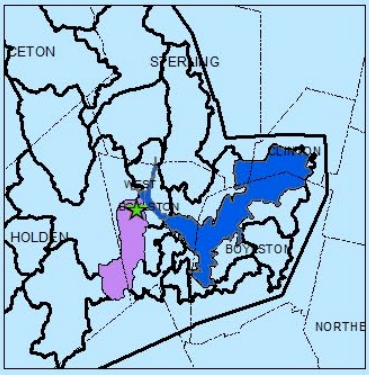
DCR - Wachusett Reservoir

Proposed Timber Sales FY 2019

Locus Map (Scale 1:72,000 - 1 inch =6,000 feet)



DCR - Wachusett Reservoir
Timber Lot Proposal WA-19-95



N
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1 inch = 200 feet

Outline of Proposed Area (Working Unit)
DCR Property Lines w/wo walls
Stone walls
Streams
Wetlands
Vernal Pools-Verified
Vernal Pools-Potential
Landing/s
NHESP Priority Habitats (semi-transparent)
DCR Gate/s

0 120 240 480 Feet