

# **Wachusett Harvest Proposal WA-21-231**

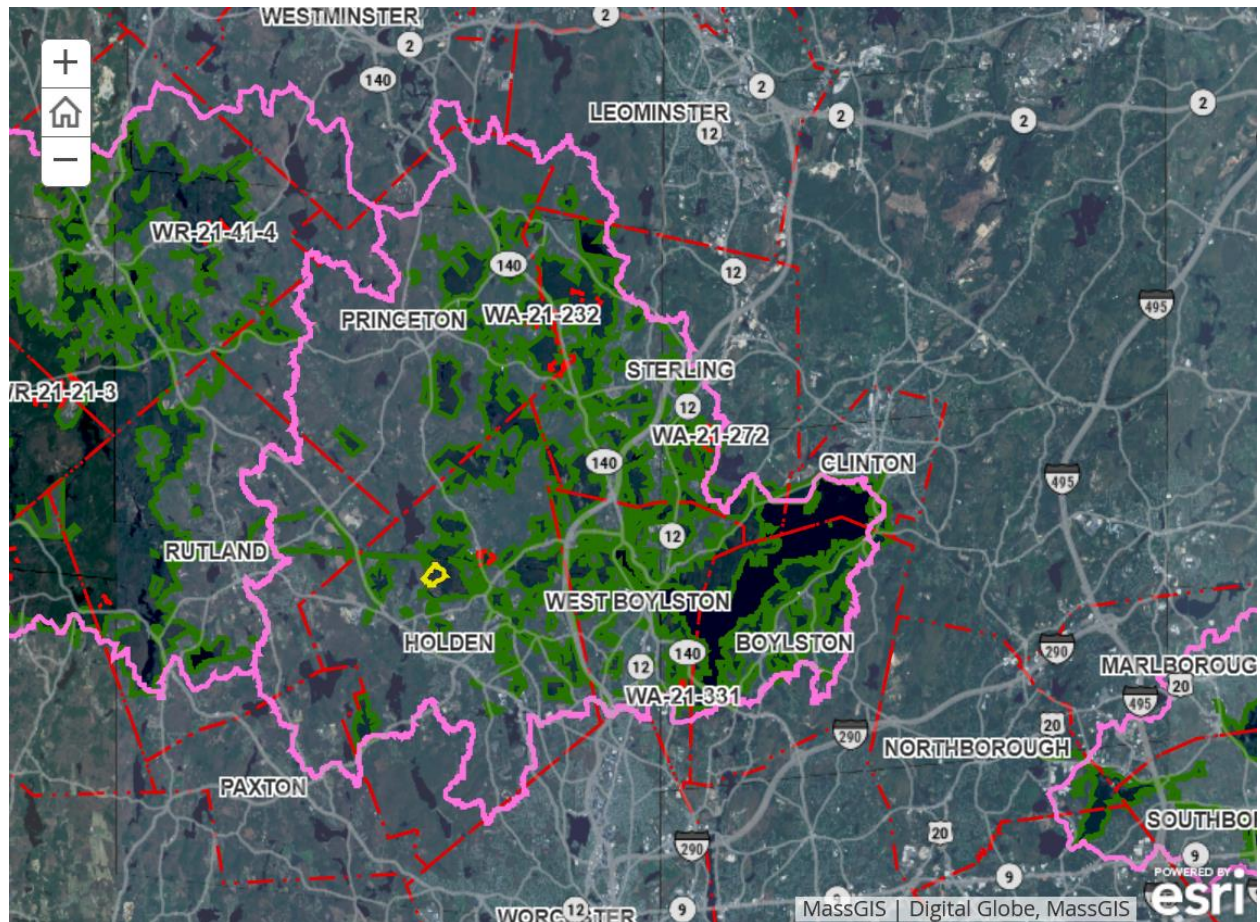
## **Proposal Goals**

The primary goal is to promote a resilient, diverse forest through the creation of canopy openings that allow young forest to develop, release established healthy young trees, and remove groups of poor quality trees. In this area, the result of past logging and a fire is an excellent understory of oak regeneration along with white pine, red maple, sassafras and paper birch.

## **Proposal Location**

This proposal is located in Holden, along an old railroad line running between the Quinapoxet River and Asnebumskit Brook. The northwest side is bound by the old railroad bed; the northeast and east sides are bound by Bear Brook and an arbitrary line through Bear Swamp; and the south side by the edge of the old Parker fields and the DWSP property boundary stone wall.

**Total Acres: 47**



## General Description

	Overstory Type(s)	Acres
<b>Dominant</b>	Oak, mixed - dry site	36
<b>Secondary</b>	Mixed hardwoods	19

	Understory Type(s)
<b>Dominant</b>	Tree seedlings/saplings dominate site

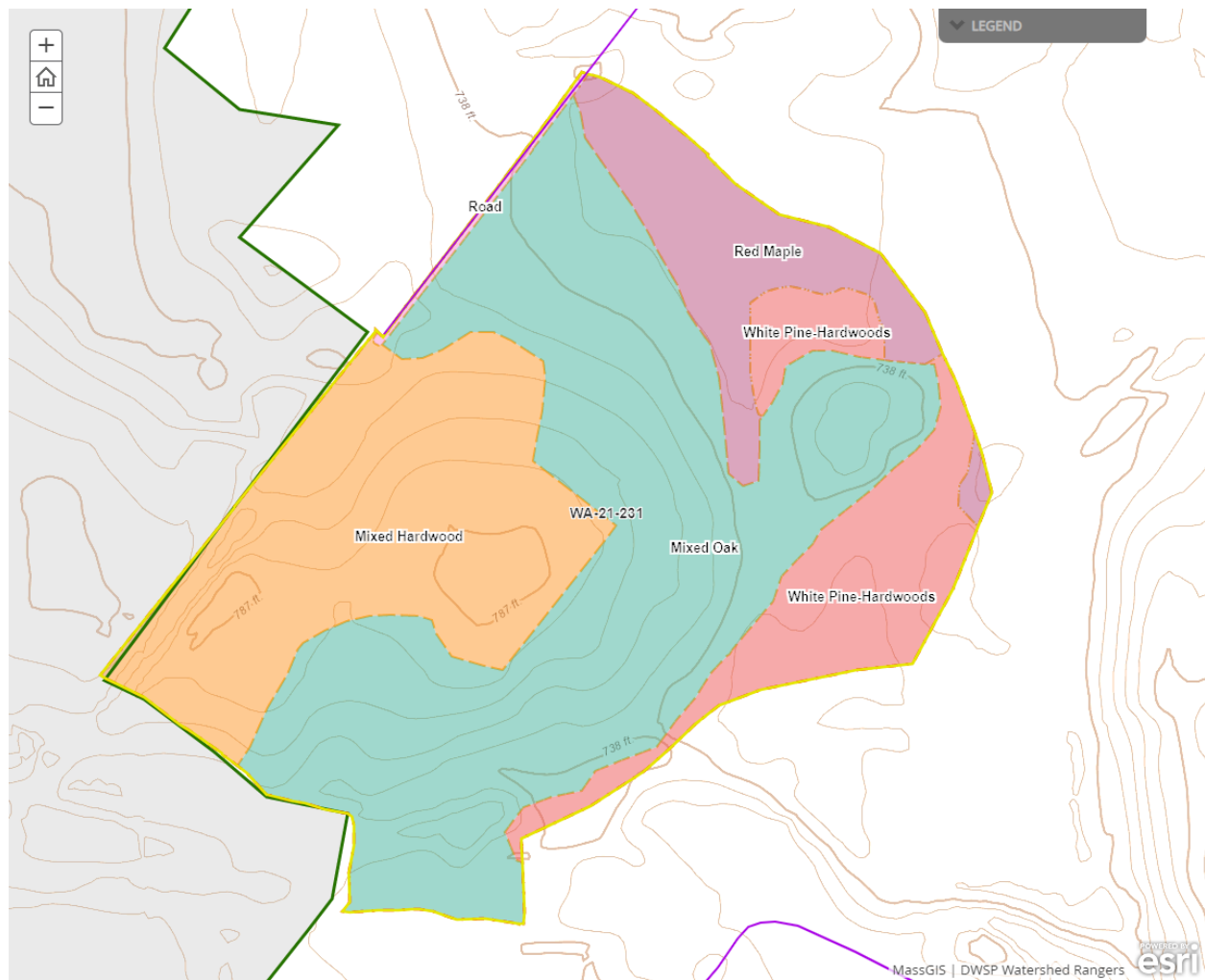
**Description of forest composition/condition:**

This property was purchased by the MDC in 1993 just about the same time that a severe wildfire burned through much of the these 59 acres. This area had also been heavily logged prior to MDC acquisition. The result of these two disturbances was the establishment of an excellent understory of primarily hardwood regeneration although white pine is present as well. In fact, the forest cover type on 19 acres of this area is a 26-year-old mixed hardwood stand comprised of red, black and white oaks, paper birch, gray birch and red maple. There are scattered surviving white pine above this young stand. The overstory on the remaining 36 acres is a mixed oak stand comprised of red, black and white oaks, with fewer red maple, sassafras, white pine and hemlock. Many of the trees in this stand, except for the eastern and northern lower slopes nearer to Bear Swamp, have severe fire scars on the butts. The dominant understory shrub is mountain laurel along with witch-hazel and highbush blueberry.

On the minority of the 36-acre mixed oak stand where there is not thick advance regeneration, there is a thick mountain laurel understory, particularly in the northern end of the area. Witch-hazel is the dominant shrub on the lower, eastern slopes near Bear Swamp. The age structure of this working unit is as follows: 0%, 0-20 years old; 32%, 21-40 years old; 0%, 41-60 years old; 0% 61-80 years old; 8%, 81-100 years old and 60%, >100 years old. The 36-acre mixed oak stand originated in about 1914 making it 106 years old.

#### **Assessment of Terrestrial Invasive Species:**

Sampling found no invasive species present in these 59 acres.

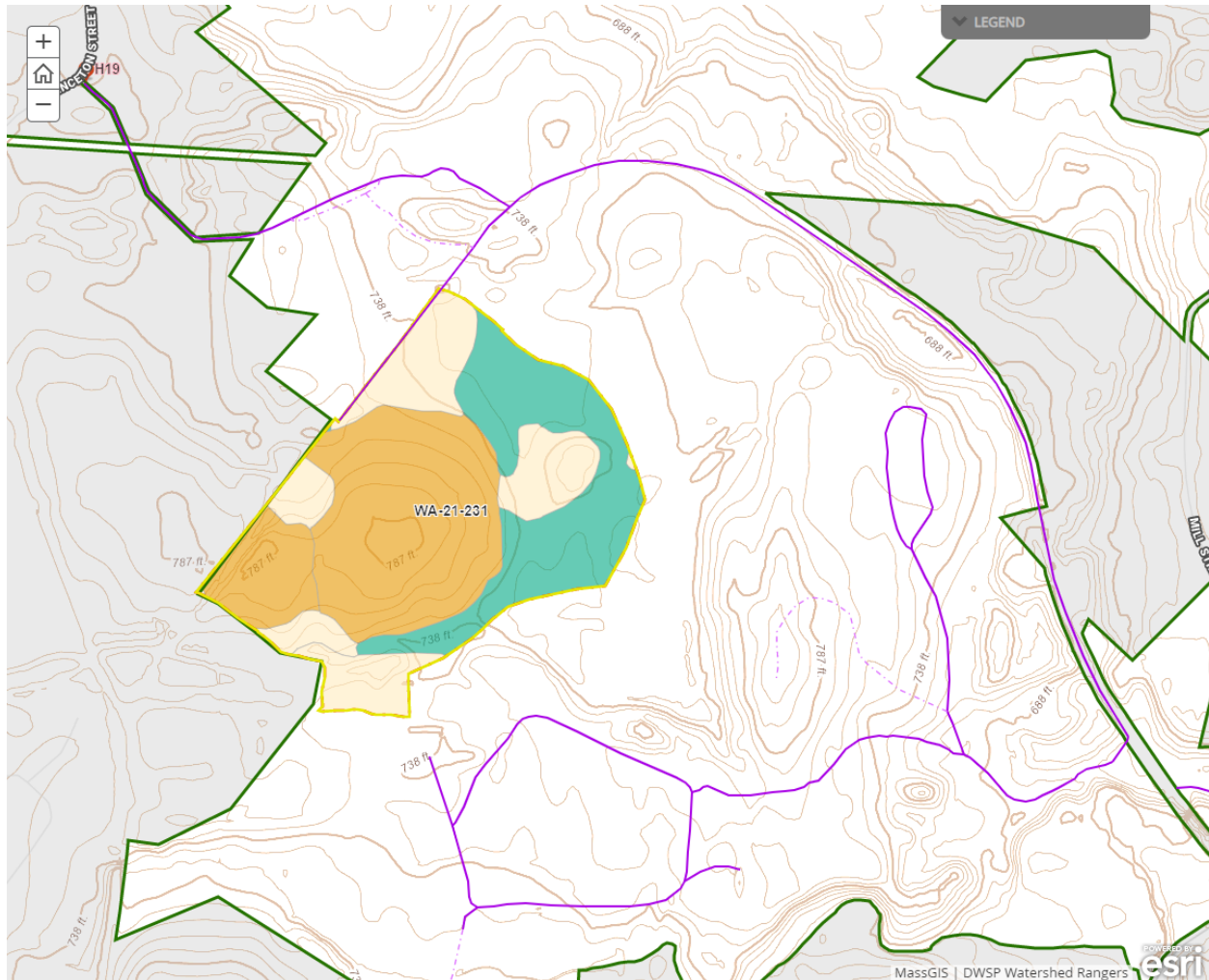


## Soils

Drainage Class	%
Excessively Drained	46
Well Drained Thin	0
Well Drained Thick	54
Moderately Well Drained	0

Poorly to Very Poorly Drained	0
-------------------------------	---

The Canton fine sandy loam, a well-drained, thick till soil is on the top of the hill and partly down the slopes. The Hinckley sandy loam, an excessively-drained outwash soil is on the lower slopes and the small knoll on the east side of the proposed sale area.



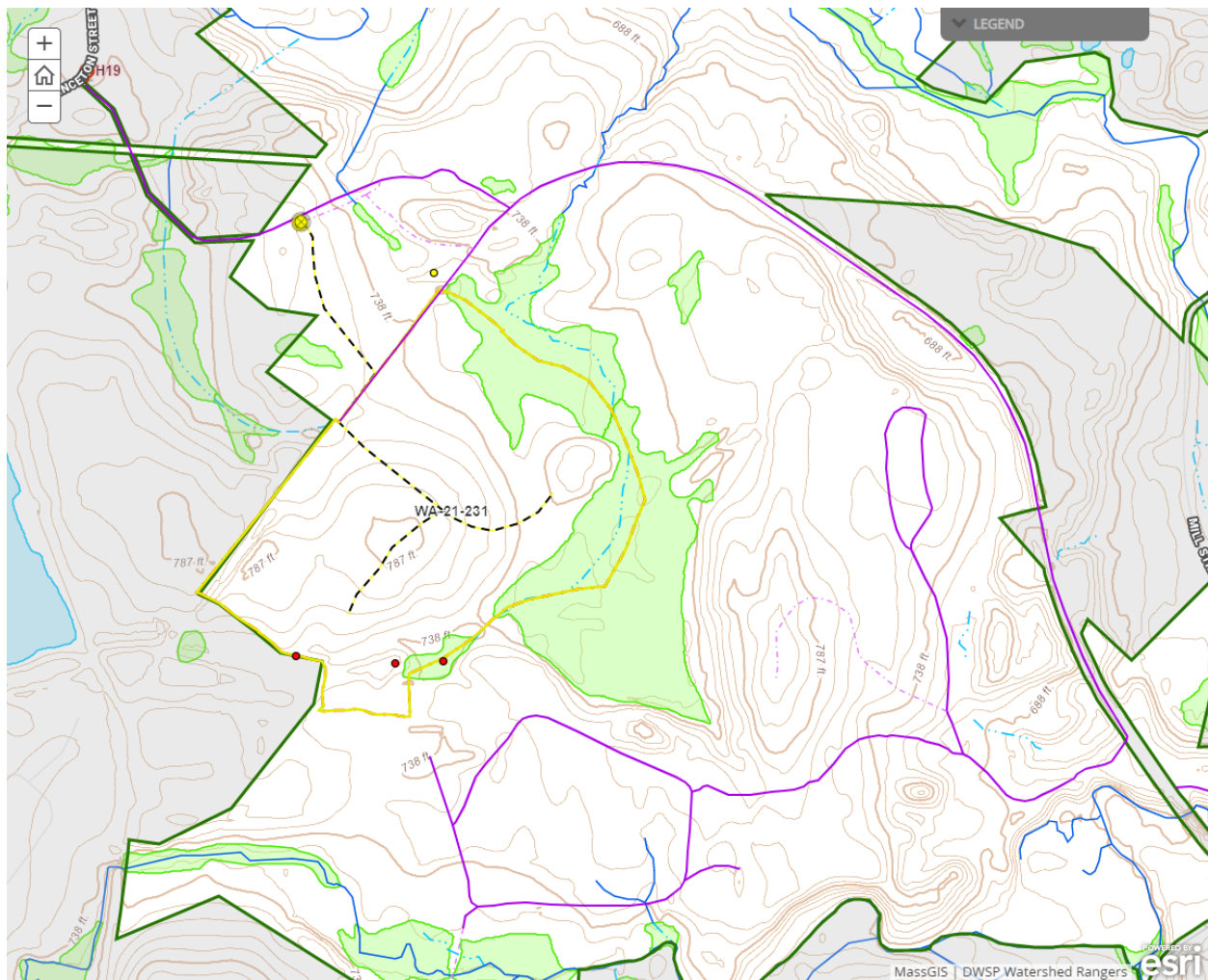
## Wetlands

- Wetlands present? - **Yes**
- Streams present? - **Yes**
- Vernal pools present? - **Yes**
- Seeps present? - **None known**
- Are stream crossings required? - **No**
- Are wetland crossings required? - **No**



- Is logging in filter strips planned? - **No** ([Riparian Zone Mgt](#))
- Is logging in wetlands planned? - **No**

Bear Swamp and Bear Brook form the eastern boundary of this sale area. There are 3 verified vernal pools (#73, 74, 473) at the far south end of this area.



## Silviculture

Acres in Intermediate cuts: **0**

Acres in prep/establishment cuts: **0**

Acres in Regeneration cuts: **19**

Average regen opening size: **1**

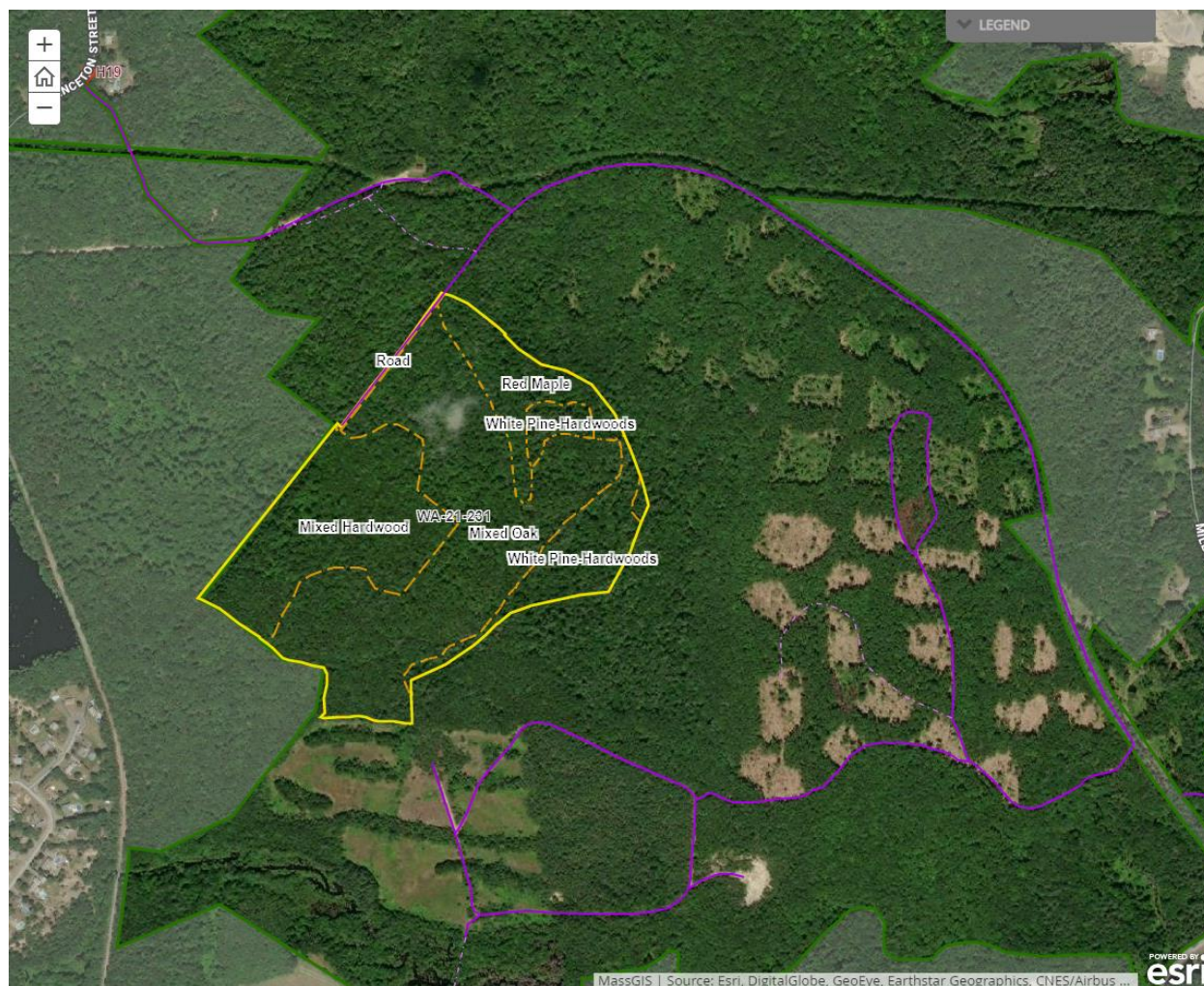
Maximum regen opening size: 2

**Description of advance regeneration in proposal area:**

There is an excellent understory of hardwoods and white pine throughout most of this area. Sampling found adequate regeneration on 80% of the plots. Most of the plots where adequate advance regeneration is not present there was interfering levels of mountain laurel...this was the case on 10% of the plots. The regeneration is dominated by white oak, red oak and black oak along with white pine, red maple, sassafras and paper birch.

**General comments on silviculture proposed:**

Given the excellent and diverse understory of saplings, openings will be made in the overstory throughout this area totaling up to 19 acres. This will result in the establishment of a new age class on 1/3rd of this management unit. These openings will range in size up to about 2 acres and average about 1 acre. Following this harvest, the age structure of this area will be approximately as follows; 33%, 0-20 years old; 32%, 21-40 years old; 0%, 41-60 years old; 0%, 61-80 years old; 8%, 81-100 years old and 60%, >100 years old. This will be one of the first management units where the goal of having 3 age classes of young, middle-aged and old forest has been achieved.

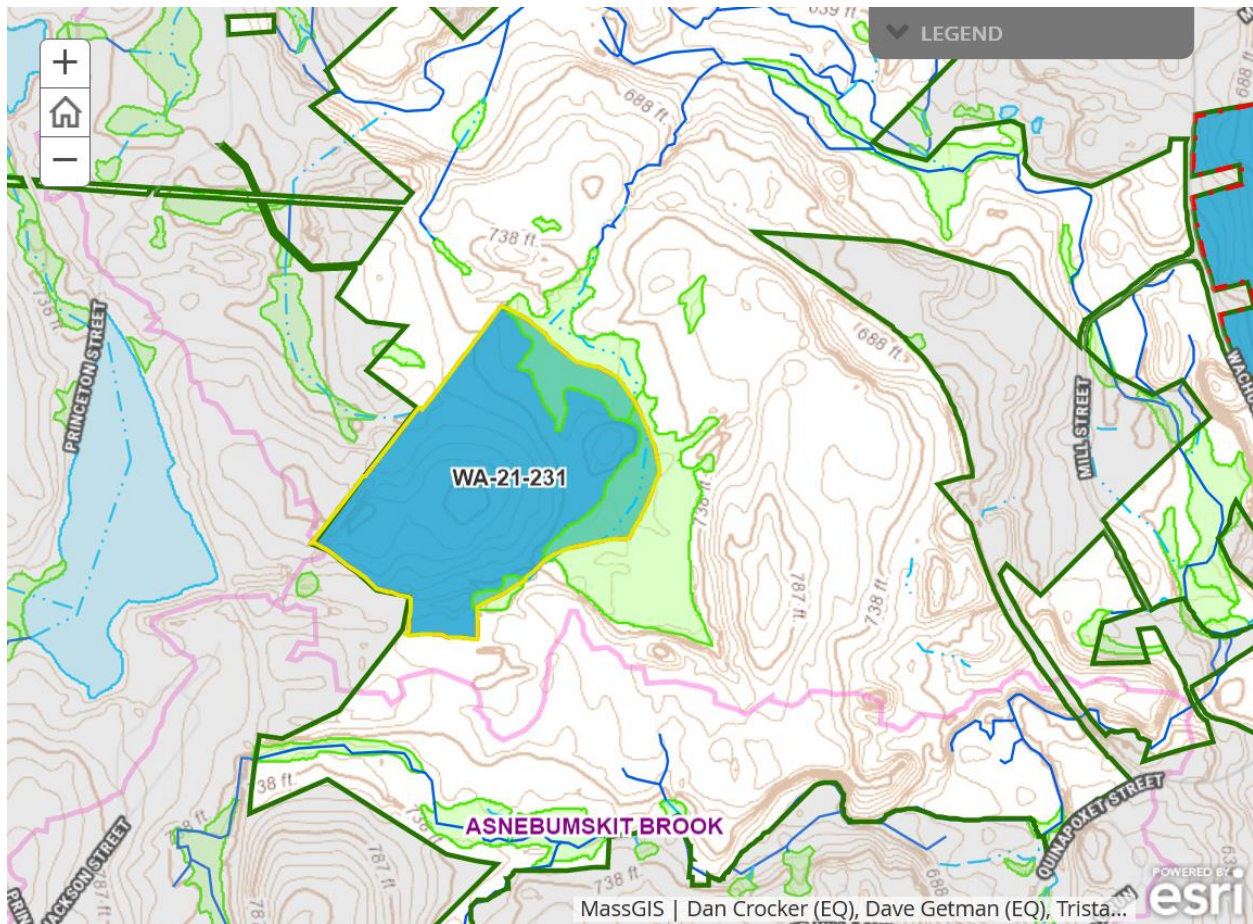


## Subwatershed Analysis

Sub-watershed number	Total DCR-owned Acres	Acres Regenerated on DCR Land in the last 10 years	Acres Remaining for Regenerating Up to the 25% / 10 Year	Acres part of this proposal
14 (Quinapoxet River)	2464	92	523	59

The proposed level of cutting falls below the 25% threshold.





## Harvesting Limitations

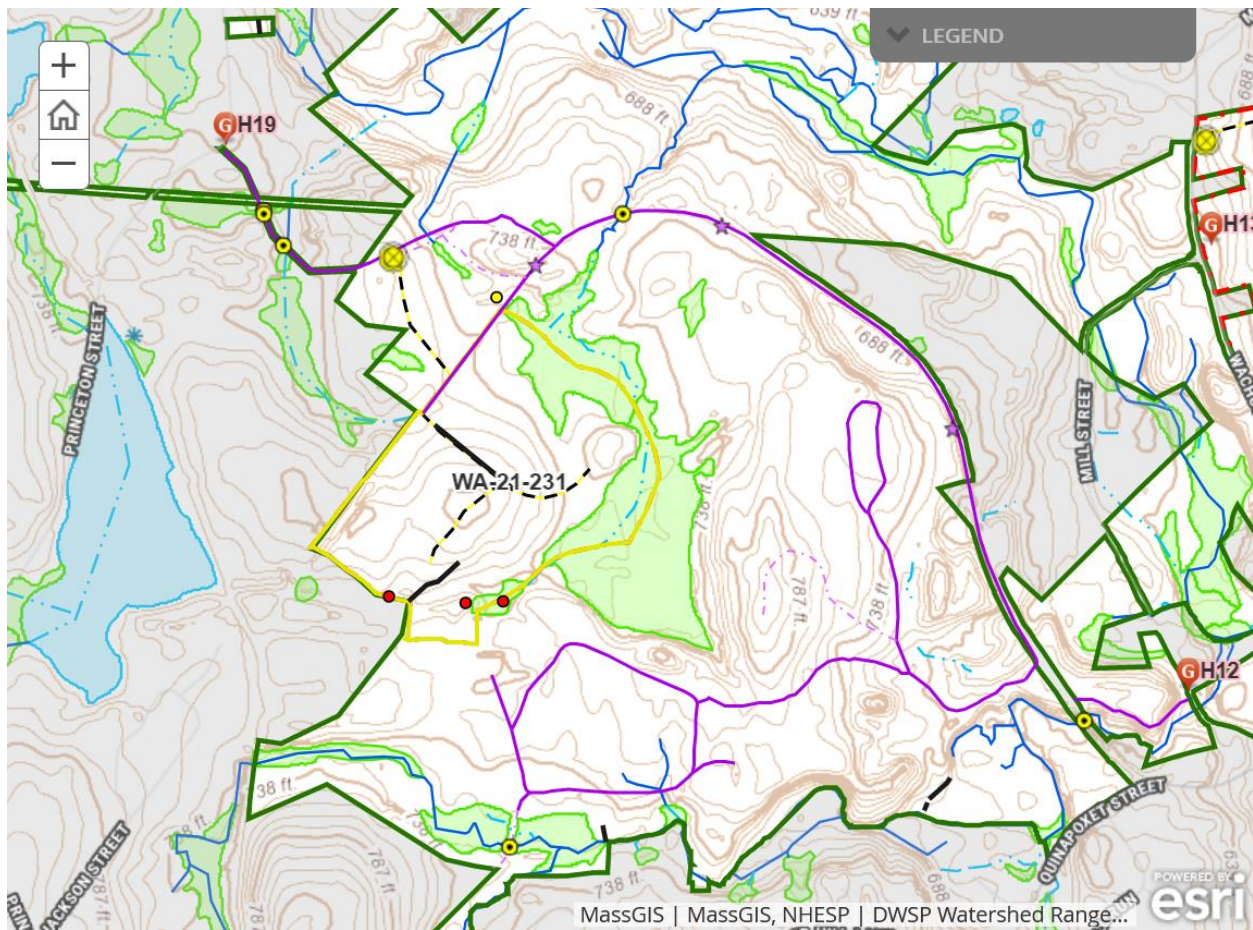
Forwarder required: **Yes**

Feller/processor required: **Yes**

Steep slopes present: **No**

### Comments on harvesting limitations:

With advance regeneration present and a desire to protect as much of it as possible during the harvest, a cut-to-length harvesting system will be employed.

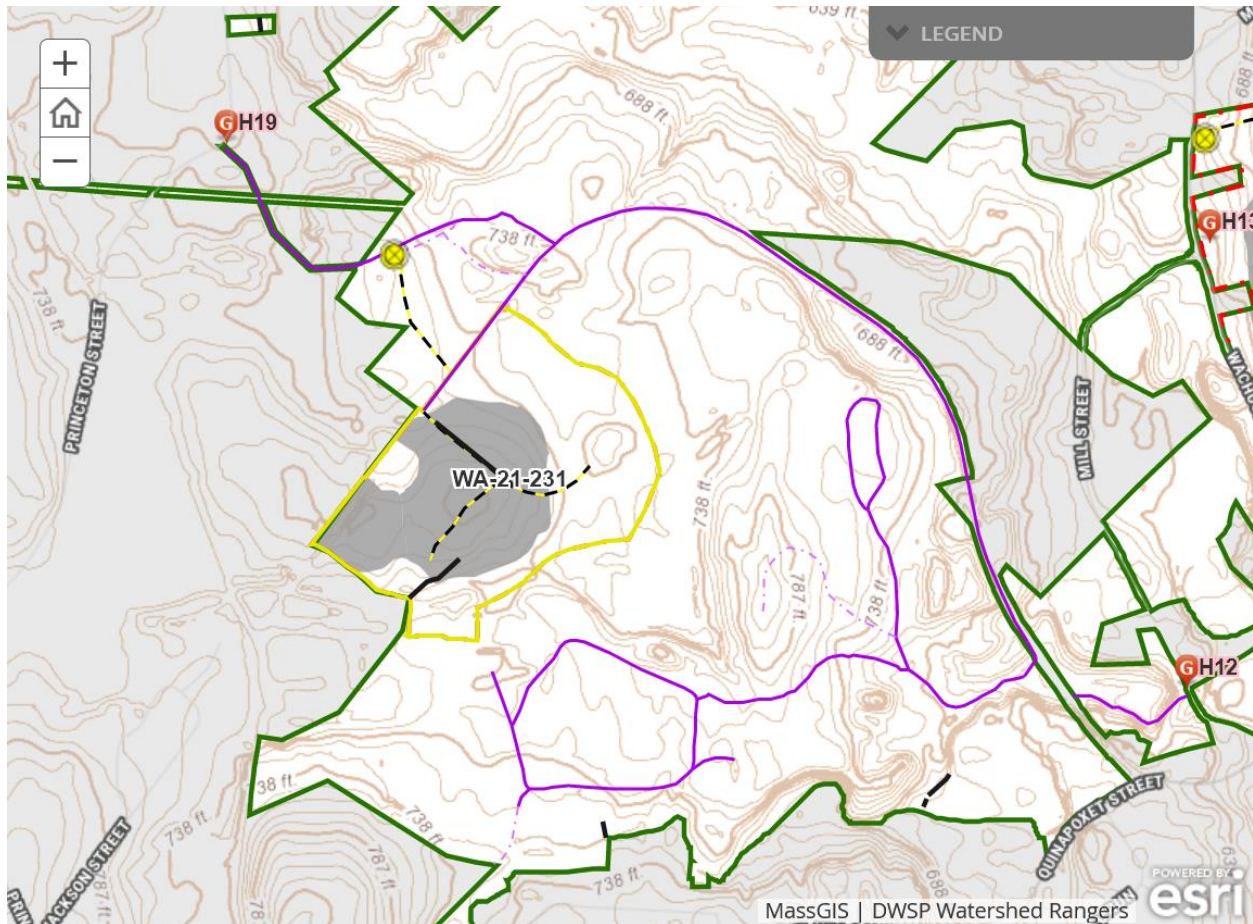


## Cultural Resources

### Comments on Cultural Resources:

There are few walls present in this lot. Surface stone is prevalent on the hill.





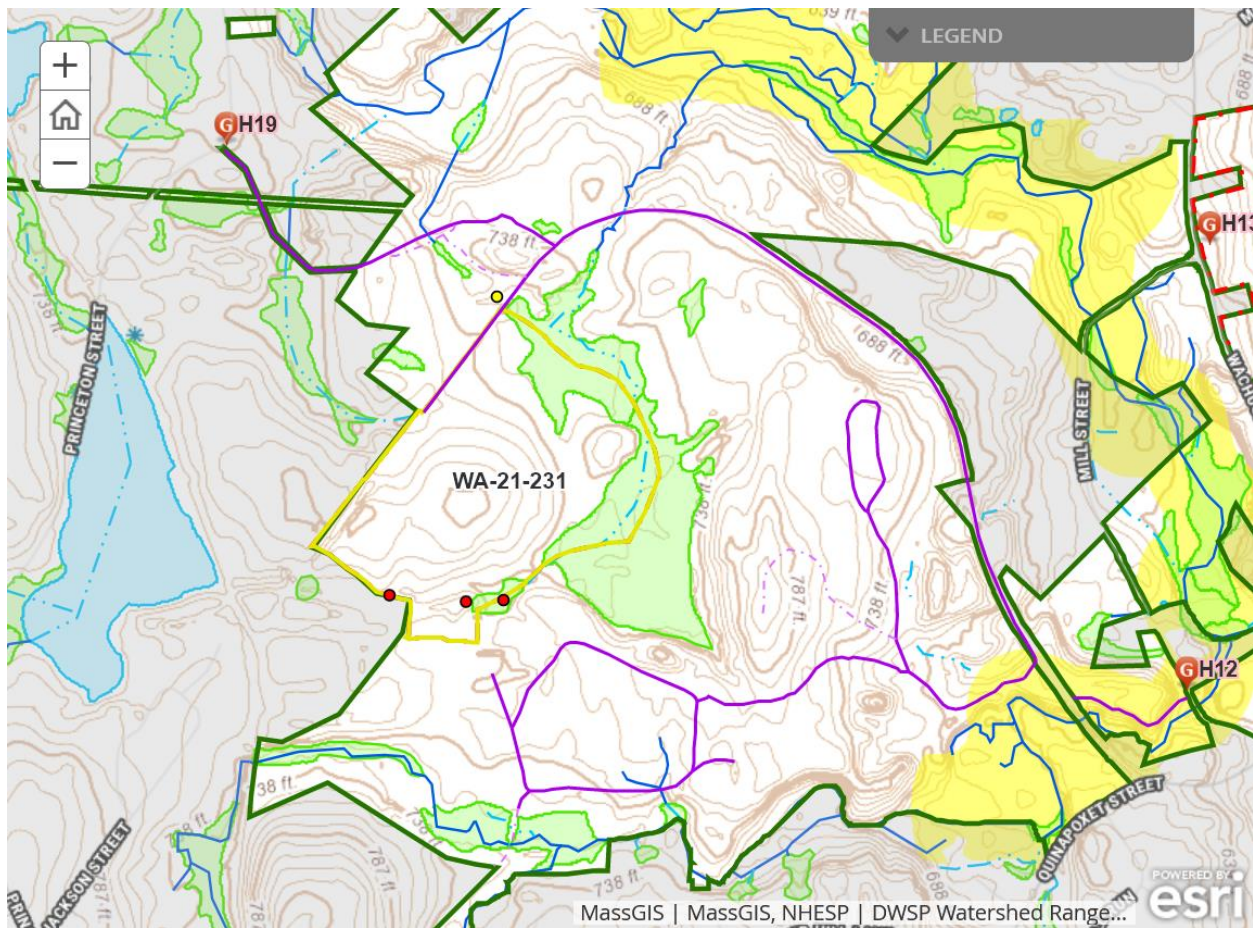
## Wildlife Resources & Rare and Endangered Species

### General Wildlife Comments:

Incidental pellet observations indicate that deer and moose utilize the lot. Deer browse was high on some plant species (e.g., maleberry), but tree regeneration did not seem significantly impacted. Cavities were noted in numerous trees, which may offer beneficial denning or nesting sites for species. If large cavities are observed or being used by wildlife, those trees should be retained when possible.

### Comments on Rare Species/Habitats:

NHESP has determined that certain state-listed sensitive species or habitats may exist within the lot proposal area. To protect them from unnecessary disturbance, detailed information regarding affected species and their locations is not included in this report. DWSP will coordinate with NHESP and follow recommendations to protect these species during the proposed activity.

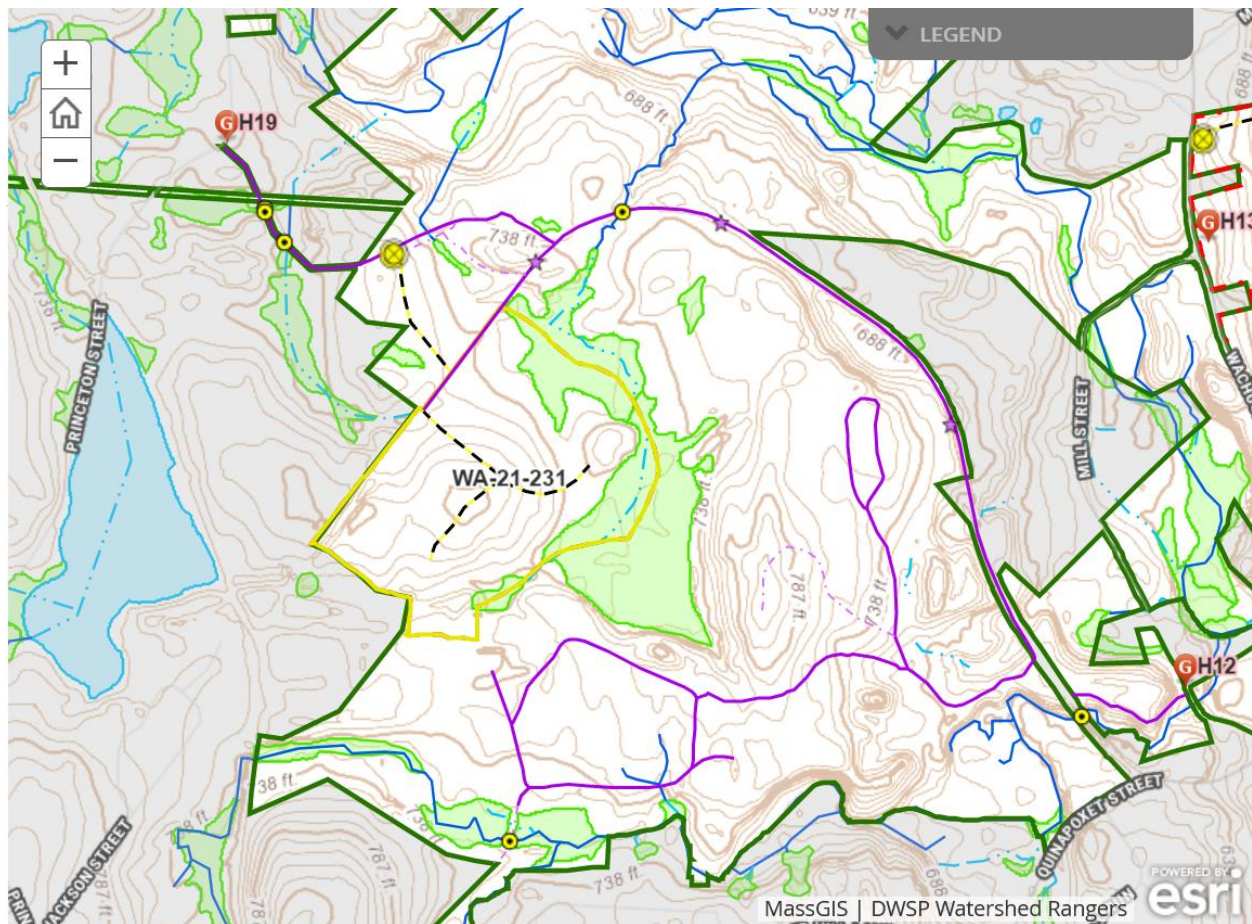


## Environmental Quality Engineering

### Comments on EQ Issues:

No stream crossings or EQ comments.





## Forest Access Engineering

**Gravel needed:** No

**Landing work needed:** No

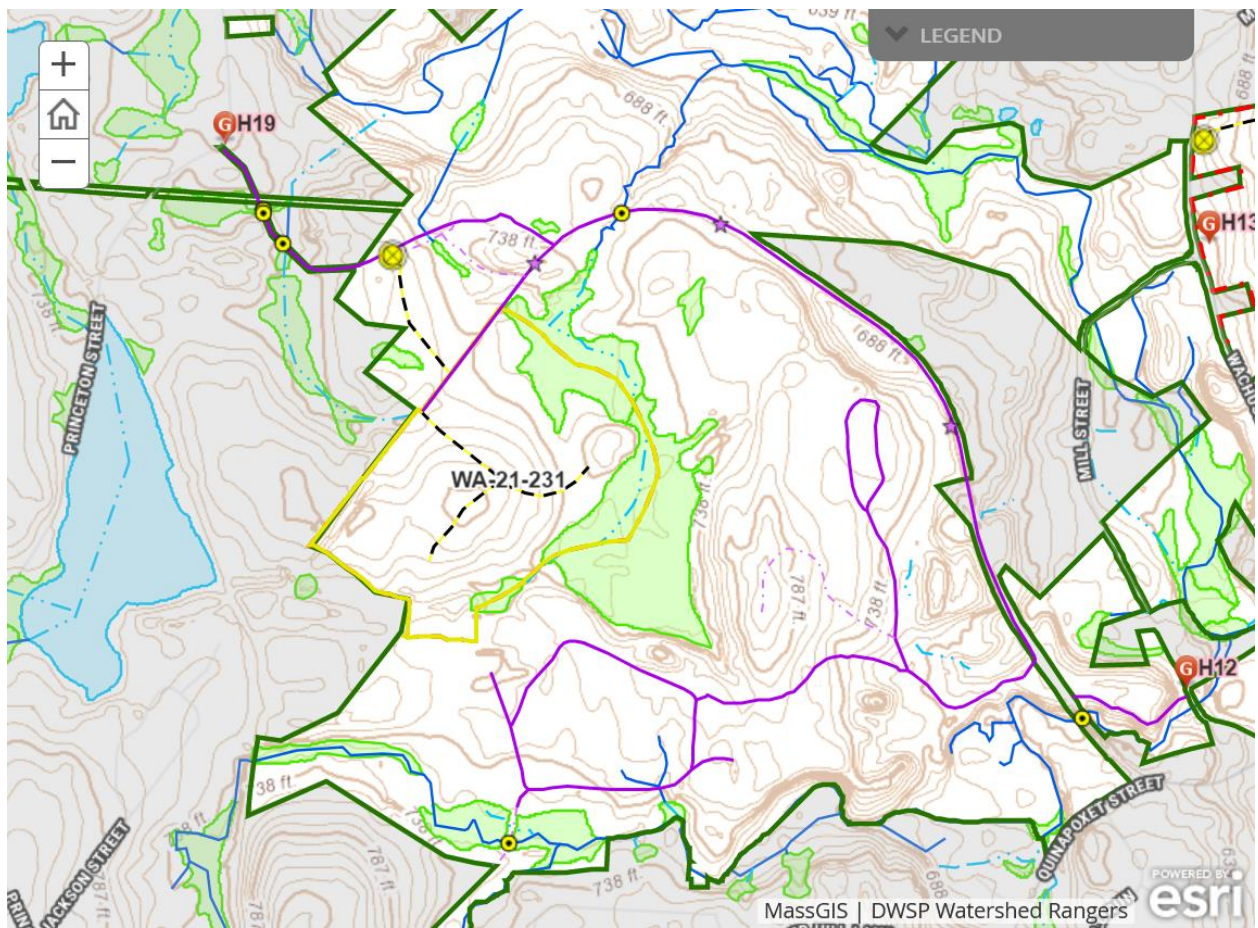
**Culverts needed:** No

**Work needed on permanent bridges:** No

**Beaver issue:** No

**Further comment on access needs:**

No engineering work is anticipated to be needed prior to harvest.





## DWSP FY 2021 Forestry Proposals – Master Legend for story maps

