Wachusett Harvest Proposal WA-21-131

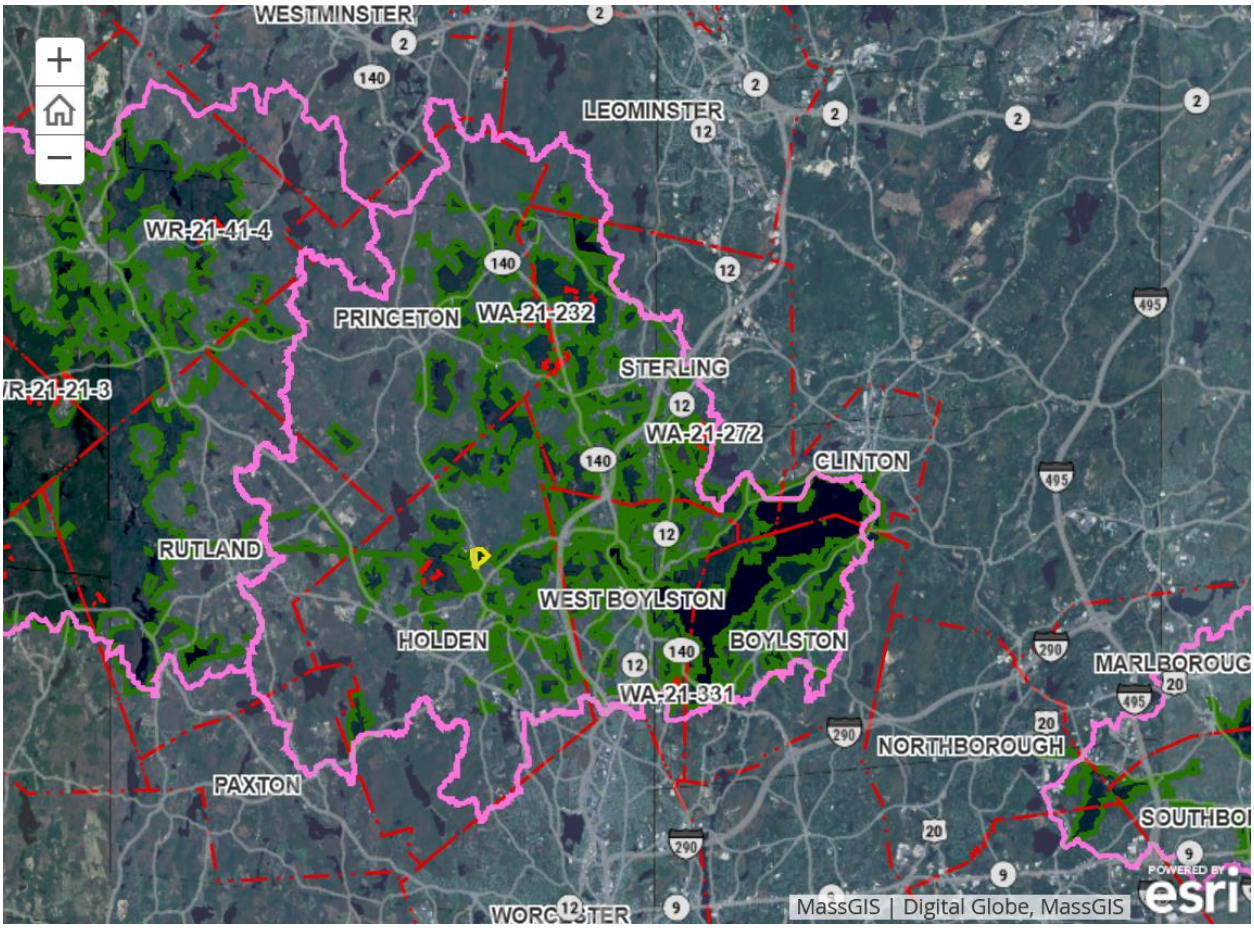
Proposal Goals

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. There is good advance regeneration throughout this area that was, in part, the result of logging in 1999. Attention will be paid to any opportunity to encourage the presence of pitch pine wherever it occurs.

Proposal Location

This proposal is located on the eastern side of Route 31 (Wachusett Street) in Holden, across from the northern intersection with Mill Street. All of the boundaries were last maintained (i.e. blazed and tagged) in 2019. Only a large piece of the
northern boundary is stone wall. The western boundary is Route 31.

Total Acres: 47



General Description

	Overstory Type(s)	Acres
Dominant	White pine/oak	16
Secondary	Mixed hardwoods	10
Other	White pine	8

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

Secondary	Mesic site - witch hazel, highbush blueberry

Description of forest composition/condition:

This property was purchased from the Quinapoxet Manufacturing Co. in 1928 along with the dam and mill buildings on the west side of Rt. 31 and along Mill Street. There are young stands at the
lowest elevations along Rt. 31 that were in grass cover until they were either no longer mowed or finally succeeded on their own in the late 1960s. Today these are stands of nice young hardwoods
comprised of sugar maple, white ash, elm and black cherry along with low-quality weeviled white pines.

The area uphill of these stands and north of the Quabbin aqueduct is a mix of white pine, white pine-oak, mixed oak and mixed hardwood stands. Overall, the species composition is dominated by white pine, white oak, black oak along with red maple and black birch. The white pine is of noticeably better form than the oaks. There are numerous scattered dead pitch pine near the top of the hill and to the north. A timber sale in 1999 created a handful of small openings in the overstory and these have regenerated well to a mix of hardwood species, although a couple of the smaller openings are dominated by red maple and black birch.

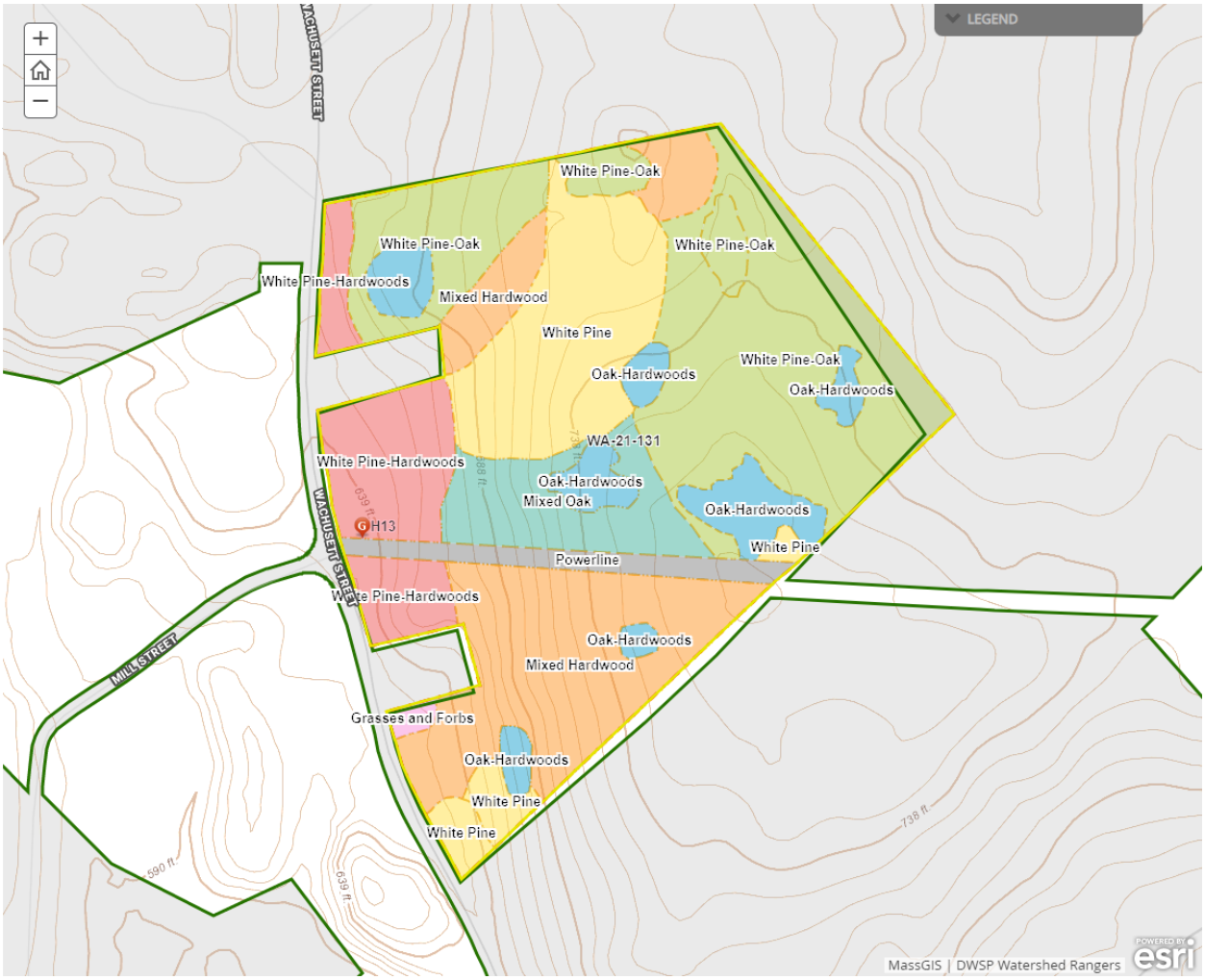
Very little work occurred in the area south of the aqueduct in 1999. The overstory here is dominated by red maple, red oak and white oak along with white pine. There is also a good component of pitch pine which are generally alive and well. There is a good understory of regeneration in this area as well with an increasing amount of white pine at the lower slopes. This area will be a challenge to manage due to the consistently steep and rocky slope.

The age structure of this working unit is as follows; 10%, 0-20 years old; 0%, 21-40 years; 11%, 41-60 years; 20%, 61-80 years; 42%, 81-100 years and 17%, >100 years old.

A stretch of the Wachusett Greenways trail system traverses this area. There are plans to expand this trail network on this property in the near future.

Assessment of Terrestrial Invasive Species:

Sampling found invasive species in just one of 100 plots taken. There was a small level of honeysuckle in a plot in the young stand near Rt. 31. There is more honeysuckle on the aqueduct.

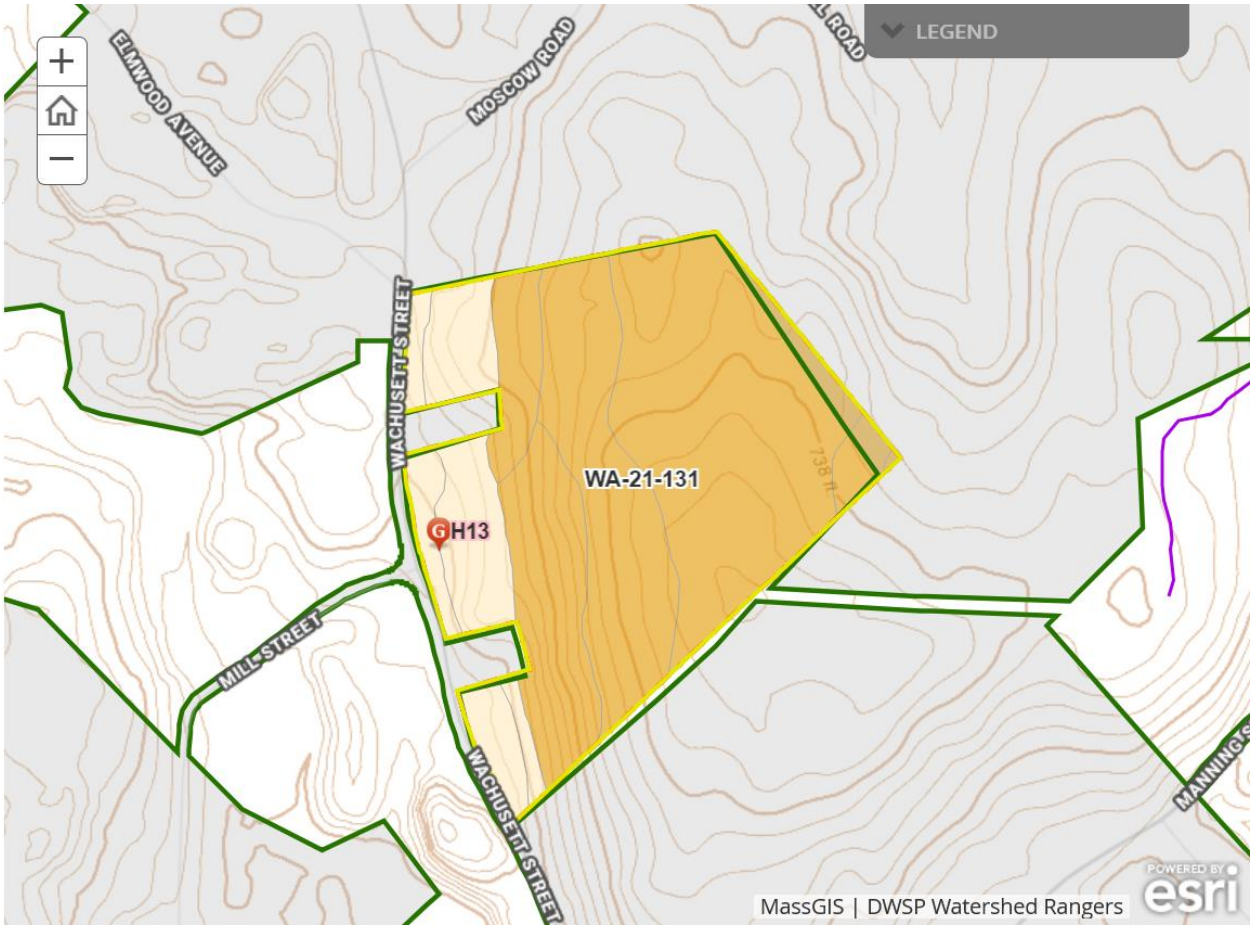


Soils

Drainage Class	%
Excessively Drained	19

Well Drained Thin	0
Well Drained Thick	81
Moderately Well Drained	0
Poorly to Very Poorly Drained	0

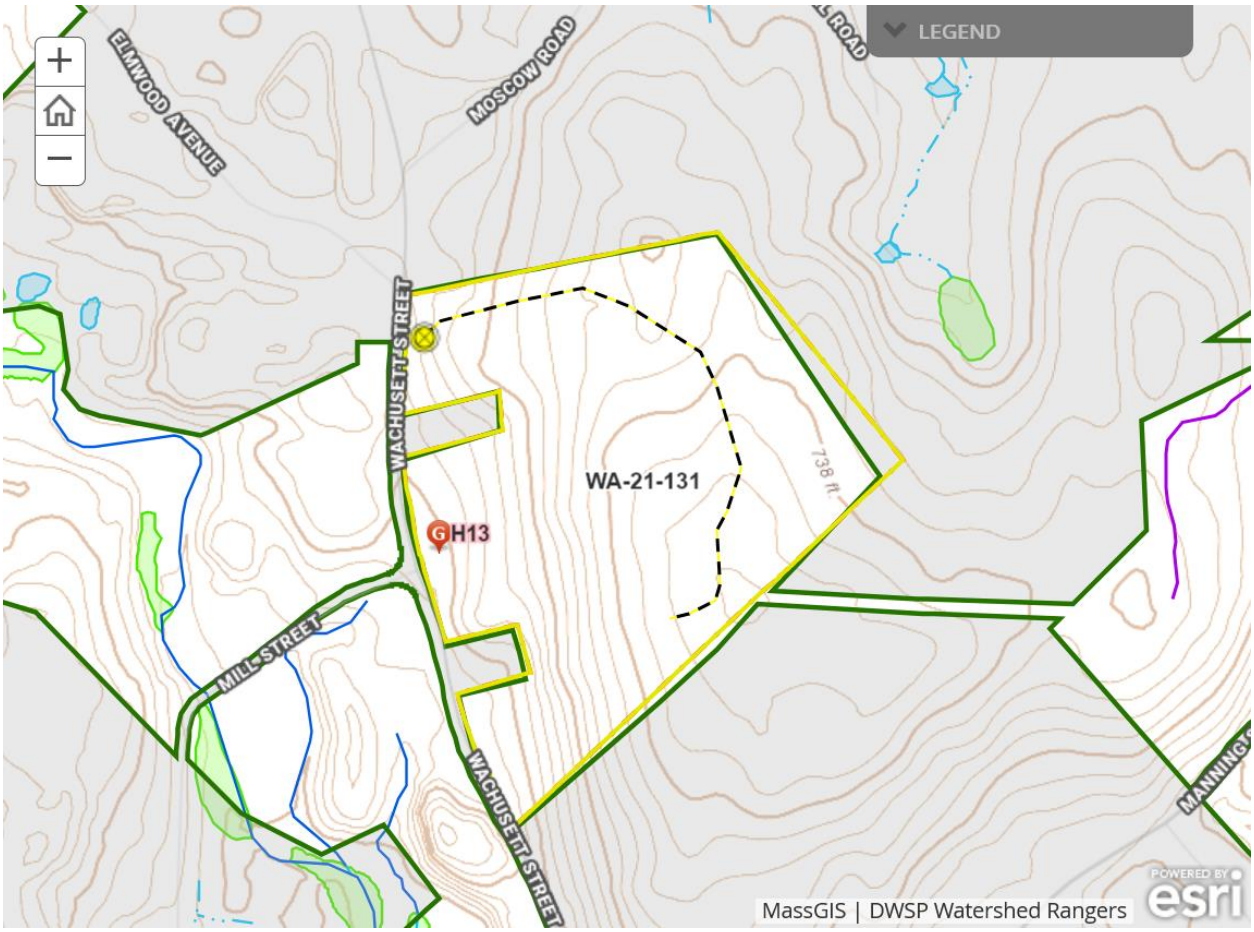
The excessively drained soils are located on the lower elevations along Route 31 and are both the Hinckley sandy loam and the Merrimac fine sandy loam. The primary well drained thick soil on the balance of the area is the Paxton fine sandy loam, extremely stony.



Wetlands

- Wetlands present? - **No**
- Streams present? - **No**
- Vernal pools present? - **None known**
- 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**

No further comments on wetlands.



Silviculture

Acres in Intermediate cuts: **0**

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

Acres in Regeneration cuts: **15**

Average regen opening size: **1**

Maximum regen opening size: **2**

Description of advance regeneration in proposal area:

Sampling found adequate advance regeneration present on 51% of the plots taken along with marginal regeneration on 26% of the plots. There was interfering levels of witch hazel on 7% of the plots. This regeneration is similar in diversity as the overstory with white pine and red maple being the most common species along with black birch, black oak and white oak. Oak was present in 53% of the plots.

General comments on silviculture proposed:

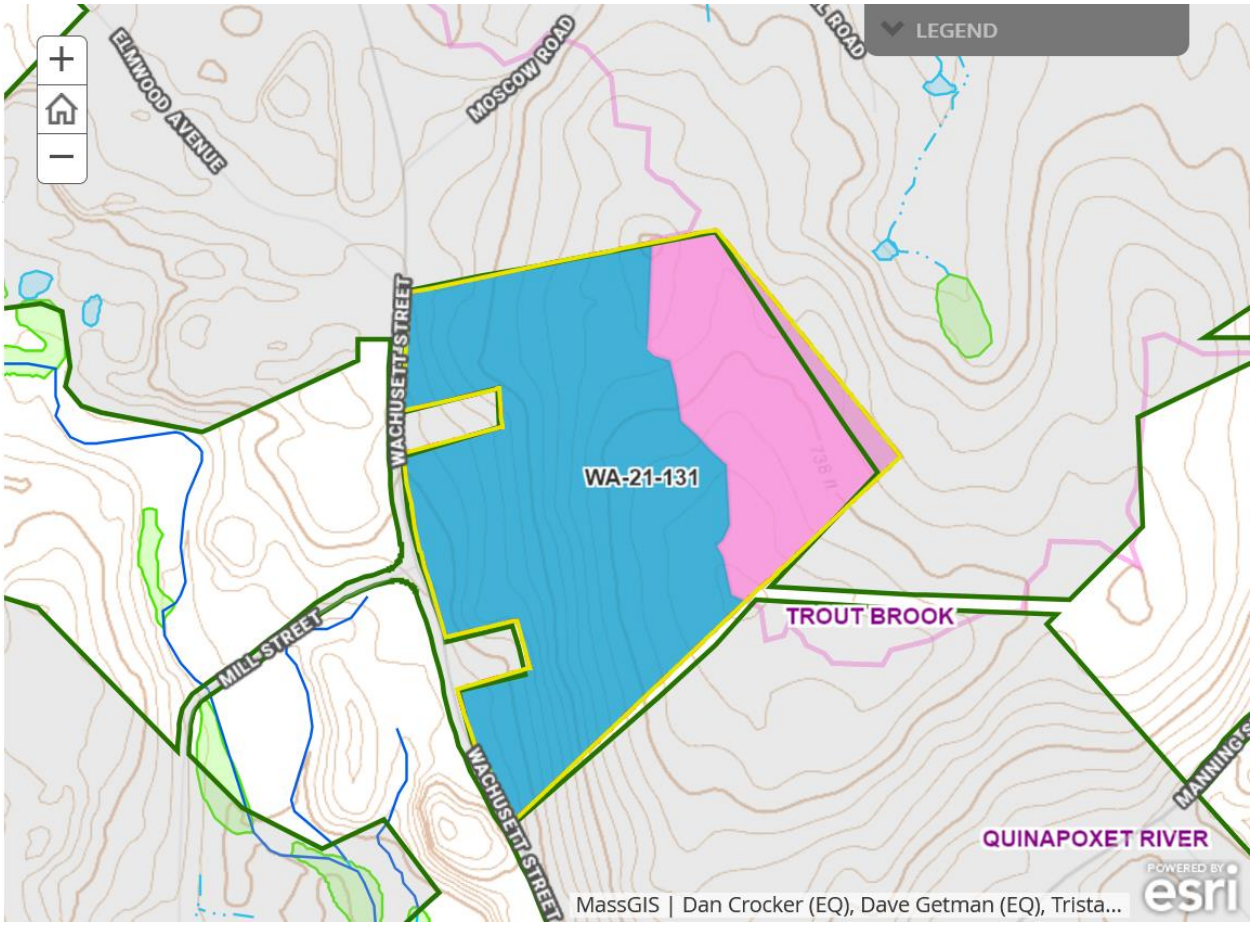
Given the good levels of advance regeneration present, the plan will be to create a new cohort of young forest on up to 15 acres or 1/3rd of the manageable forested acreage. While there is already nearly 5 acres (10%) in young forest, this was established in 1999 and will be well over 20 years old when this operation occurs. These 5 acres will be considered a separate older cohort. 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; 10%, 21-40 years old; 11%, 41-60 years old; 0%, 61-80 years old; 62%, 81-100 years old and 17%, >100 years old.

Special attention will be paid to, at minimum, maintaining the level of pitch pine wherever it is found. Any opportunity to
either regenerate pitch pine or release advance pitch pine regeneration will be pursued.

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	35
15 (Trout Brook)	1148	49	238	12

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



Harvesting Limitations

Forwarder required: **Yes**

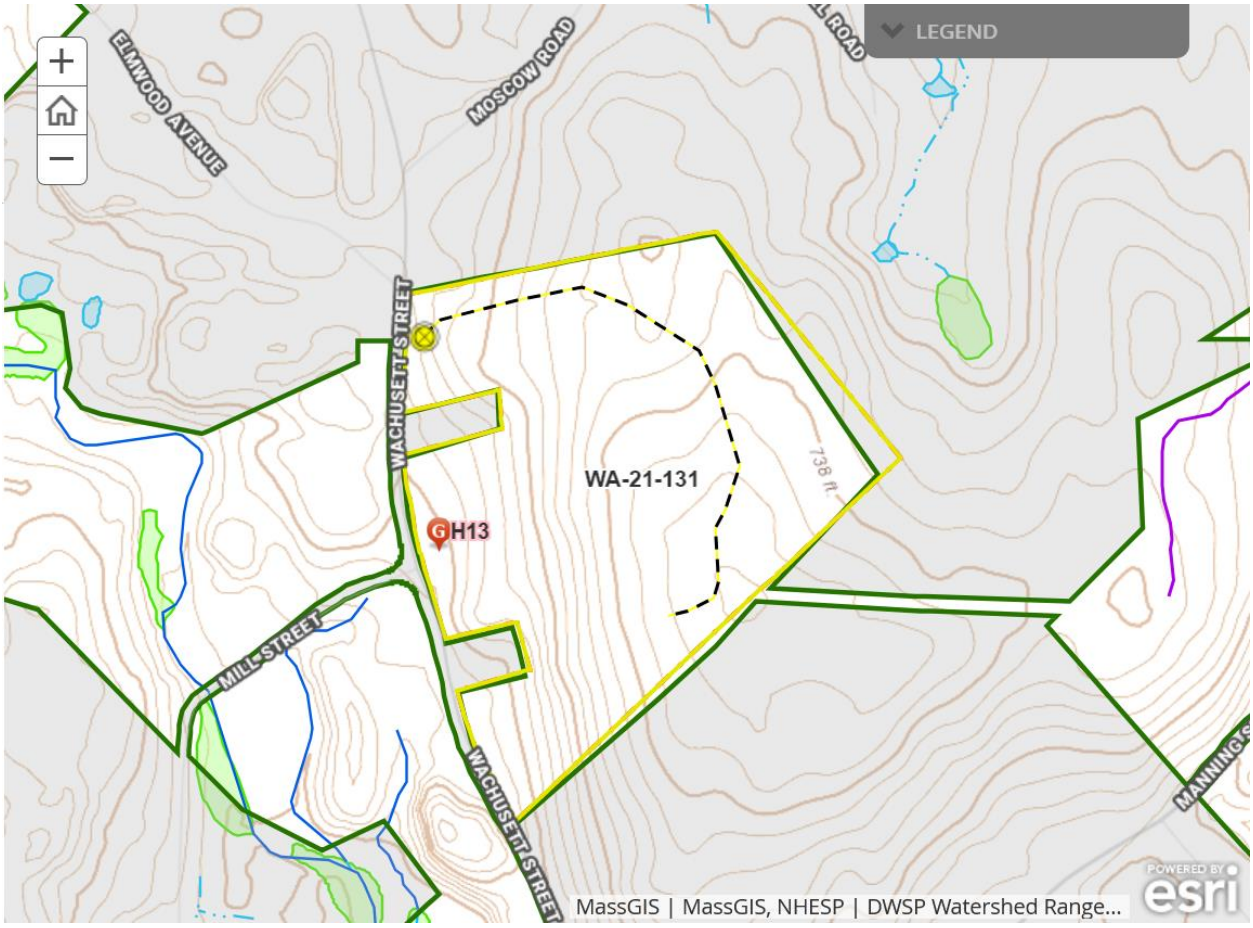
Feller/processor required: **Yes**

Steep slopes present: **Yes**

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.

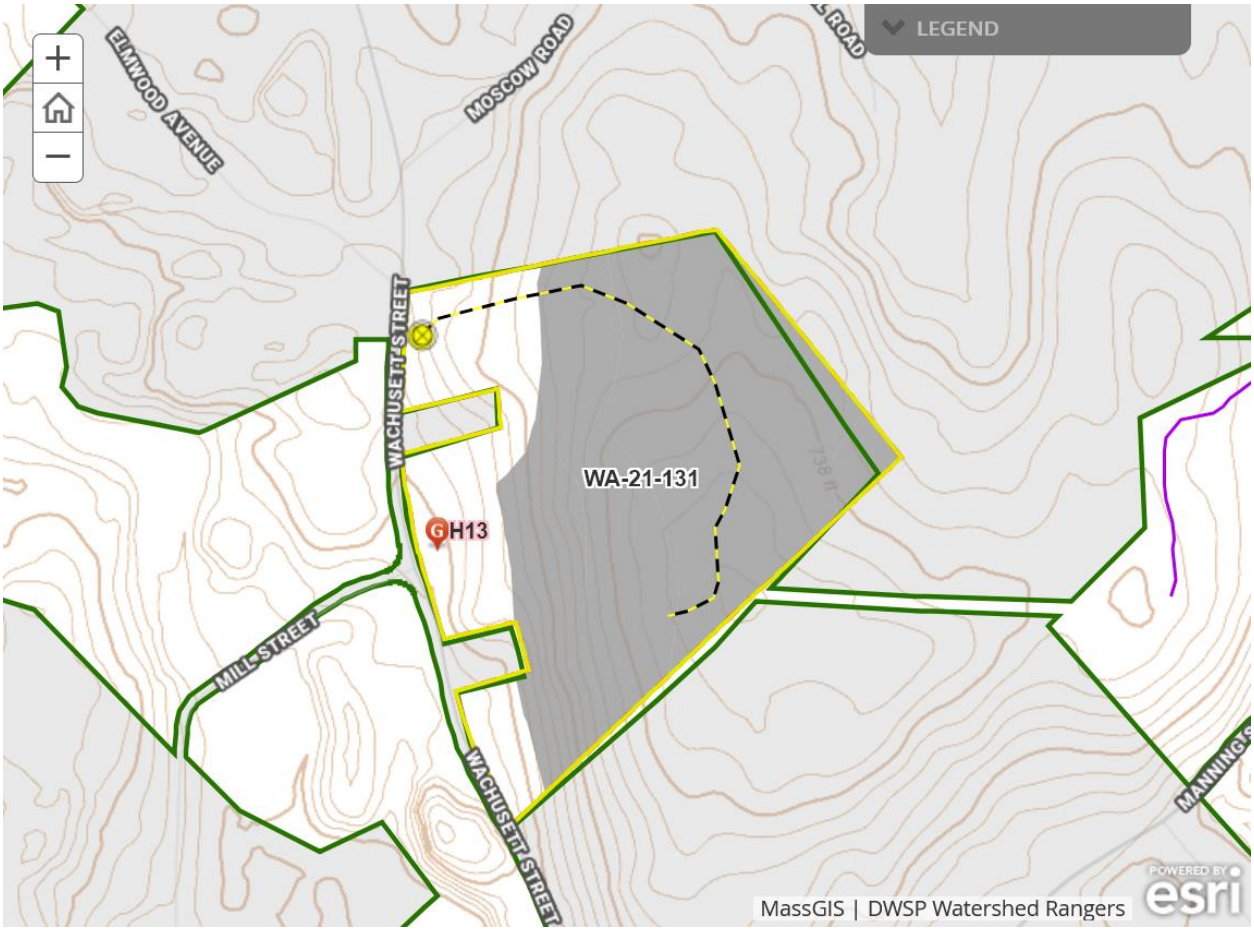
The western half of the portion south of the aqueduct meets the criteria for Steep Slopes.



Cultural Resources

Comments on Cultural Resources:

The foundations on this lot were the residence of Cyrus G. Wood, according to the 1898 atlas published by L. J. Richards. Cyrus Wood owned the Quinapoxet Manufacturing Co. mill across the road on Mill Street.



Wildlife Resources & Rare and Endangered Species

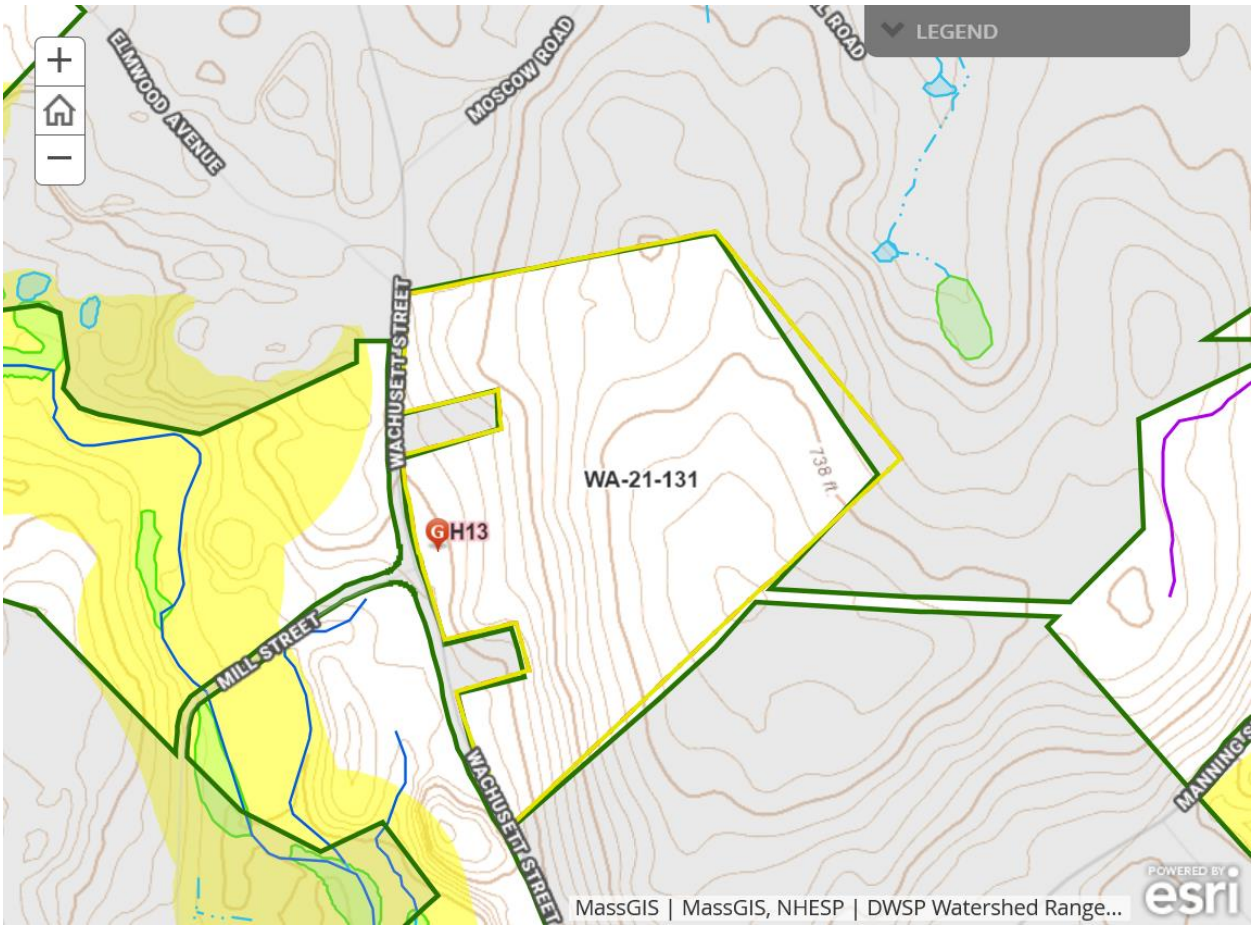
General Wildlife Comments:

There are good cavities on some of the white oaks, particularly toward the top of the hill.

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. Stick nests were observed and so they will be protected. Where they occur; streams, wetlands, seeps and vernal pools will be protected for water quality and wildlife habitat.

Comments on Rare Species/Habitats:

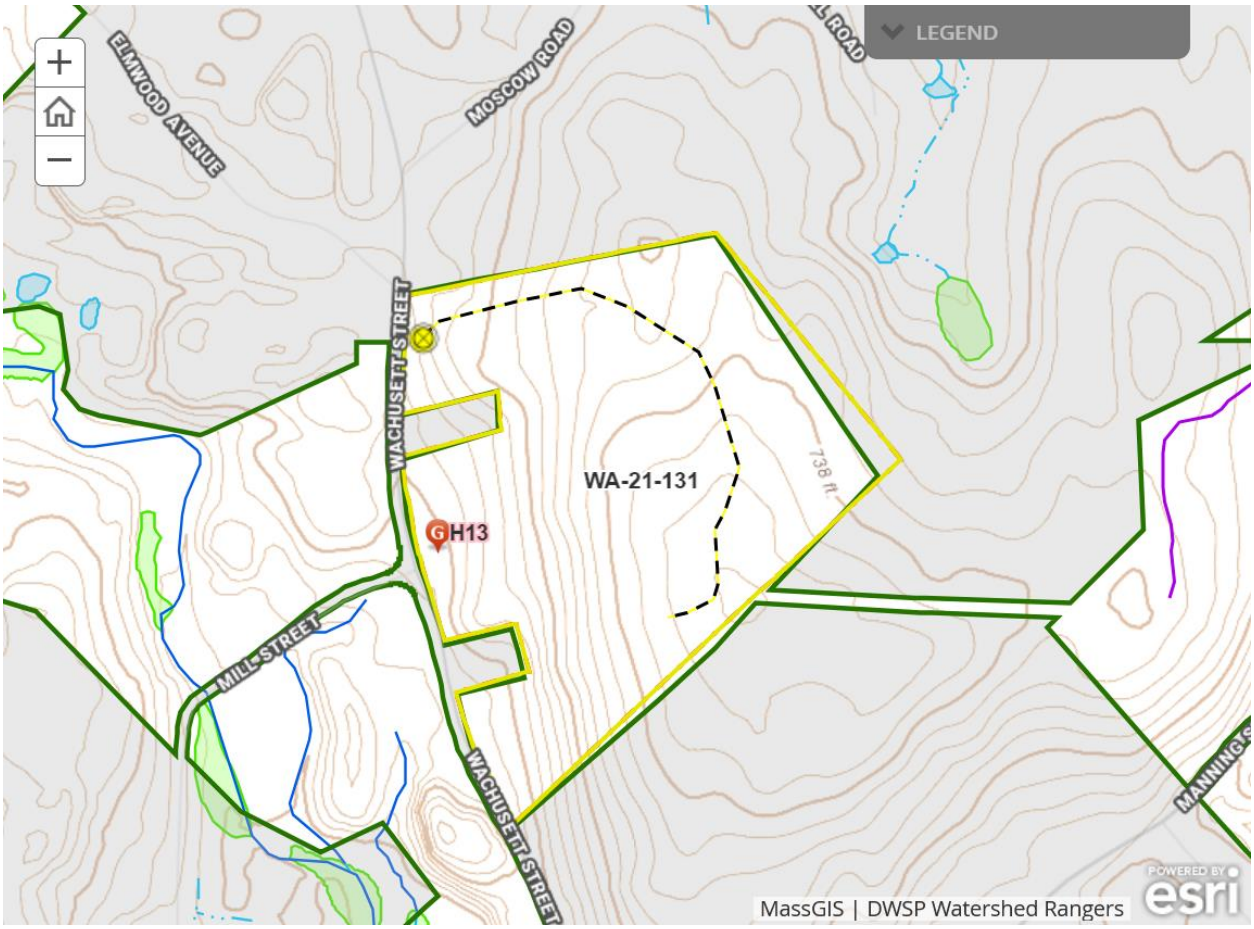
None known.



Environmental Quality Engineering

Comments on EQ Issues:

There are no stream crossings.



Forest Access Engineering

Gravel needed: No

Landing work needed: No

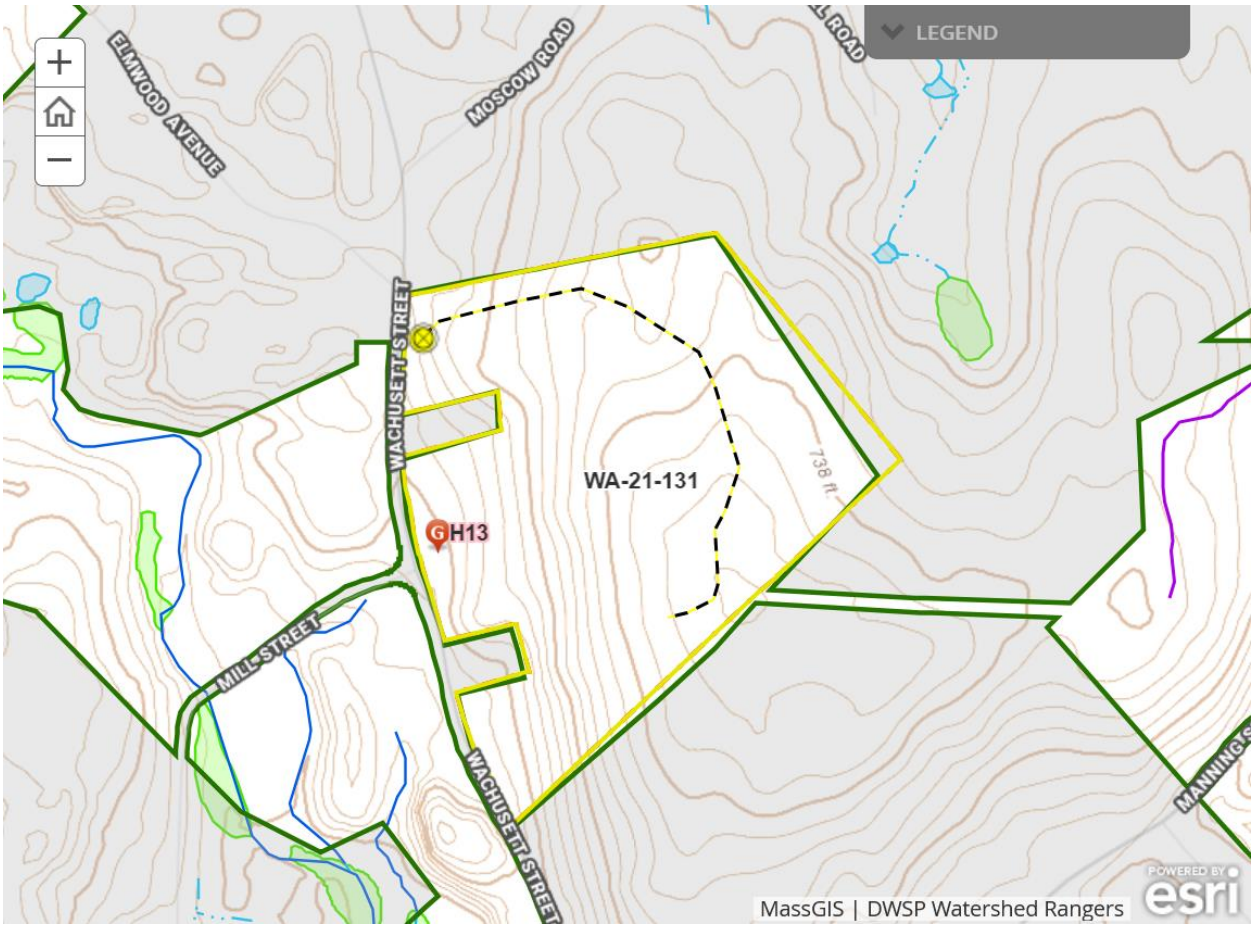
Culverts needed: No

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.


LEGEND
ELMWOOD AVENUE
MOSCOW ROAD
WACHUSETT STREET
WA-21-131
738 ft
H13
MILL STREET
WACHUSETT STREET
MANNING'S
MassGIS | DWSP Watershed Rangers
esri

DWSP FY 2021 Forestry Proposals – Master Legend for story maps