

# **Wachusett Harvest Proposal WA-20-258**

## **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.

## **Proposal Location**

The north side of this working unit is bound by Working Unit 263 which was proposed in 2016 and cut in 2017. The east side is bound by the railroad bed road, the south side is bound by the woods road that connects the railroad to the Parker pit area and the west side is a line that runs roughly through the middle of Bear Swamp.

**Total Acres: 73**



General Description

	Overstory Type(s)	Acres
Dominant	Oak, mixed - dry site	69
Secondary	Red pine	2
Secondary	White pine/hardwood	2

	Understory Type(s)
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<b>Dominant</b>	Tree seedlings/saplings dominate site
<b>Secondary</b>	Mountain laurel prevalent

### **Description of forest composition/condition:**

This is a pretty typical dry-site mixed oak stand with black oak, red oak and white oak in the overstory along with far fewer red maple and white pine. Black oak predominates on the higher and drier portions with red oak taking its place on the lower, slightly damper sections. There's a light scattering of paper birch especially in the eastern half; perhaps a vestige of the fires that were probably more common when the railroad was active. There's a small pocket of large bigtooth aspen in the northeast corner of the area near the railroad bed which are nearing the end of their lifespan. Unexpectedly, there are two small red pine plantations. The northerly one dates to 1966. The other one was planted a little bit earlier in 1959. This one however is mostly blown over in what appears to have been a microburst in about 2010.

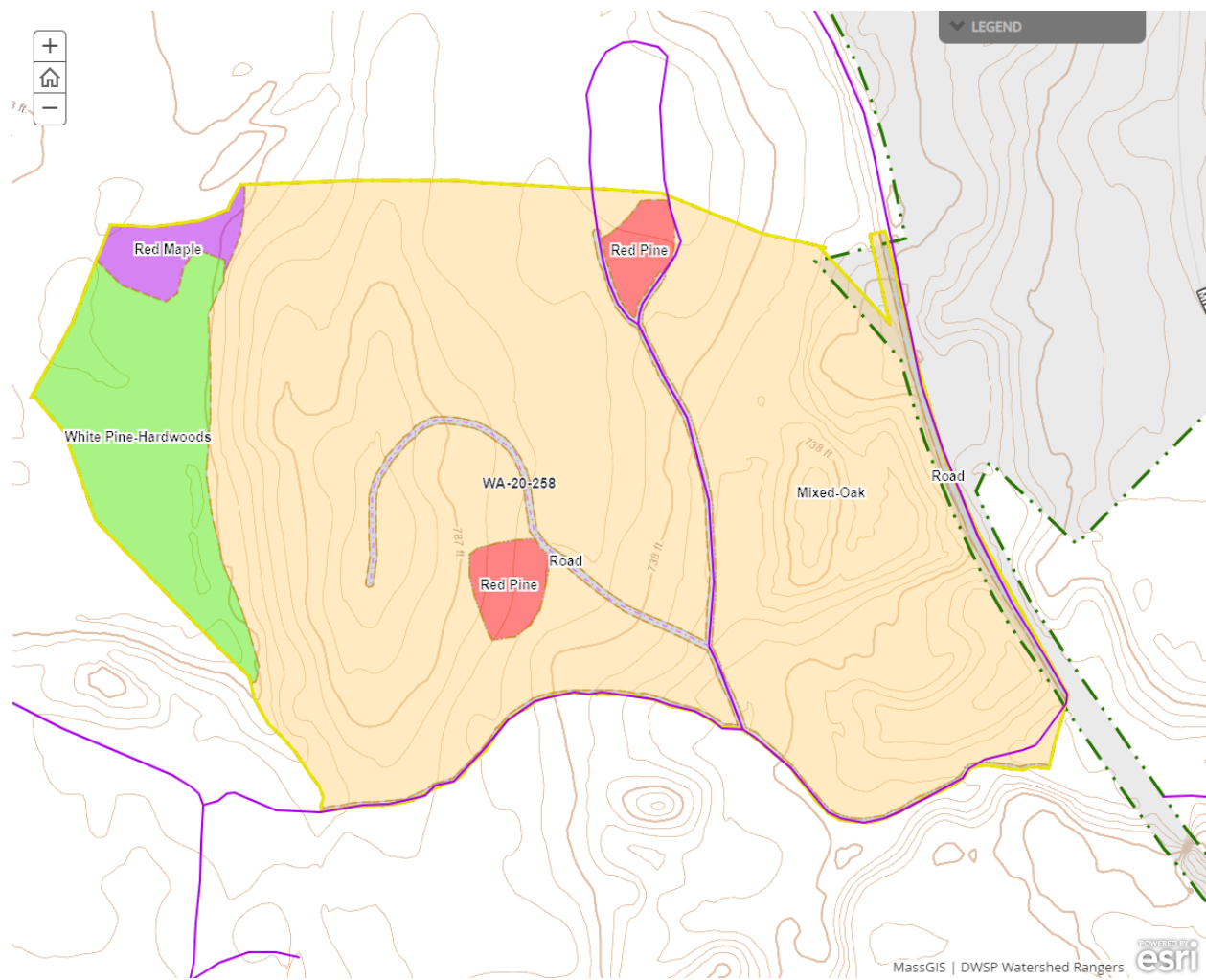
There is excellent advance regeneration through much of this area. Where there isn't advance regeneration, mountain laurel is prevalent and at clearly interfering levels. This is especially so on the west slopes overlooking Bear Swamp. In the eastern part of the area, mountain laurel is also interfering along with witchhazel in the lower, damper areas. Other common shrubs present are huckleberry, lowbush blueberry and sheep-laurel. Maple-leaved viburnum is present and seems to be pretty well restricted to the Canton till soil in the southwestern part of this area as is sassafras.

The age structure of this working unit is as follows; 0%, 0-20 years old; 0% 21-40 years, 3%, 41-60 years; 0%, 61-80 years; 2%, 81-100 years; 95%, >100 years old. Most of this forest originated in about 1917. The oldest stands originated in about 1914, making them about 106 years old.

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

Sampling found no terrestrial invasive species in any of the 166 plots taken. This is not surprising given the extremely dry character of most of this site.

While there was not much defoliation from gypsy moths in this area this year, there are a lot of egg masses throughout. We expect significant defoliation this year.



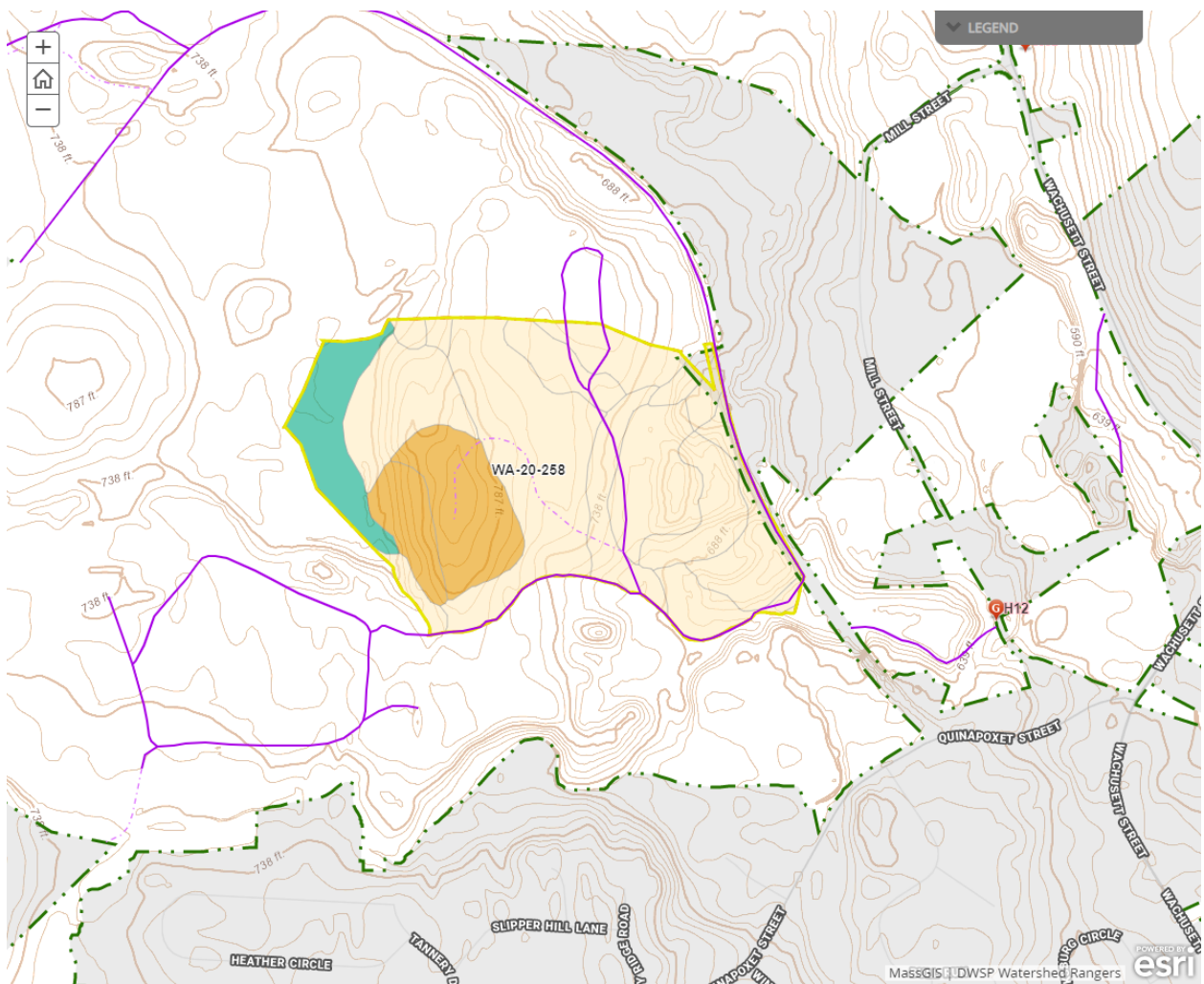
Soils

Drainage Class	%
Excessively Drained	82
Well Drained Thin	0
Well Drained Thick	18



Moderately Well Drained	0
Poorly to Very Poorly Drained	0

The excessively drained soils are the Hinckley and Merrimac sandy loams and the well-drained thick soil is the Canton fine sandy loam.



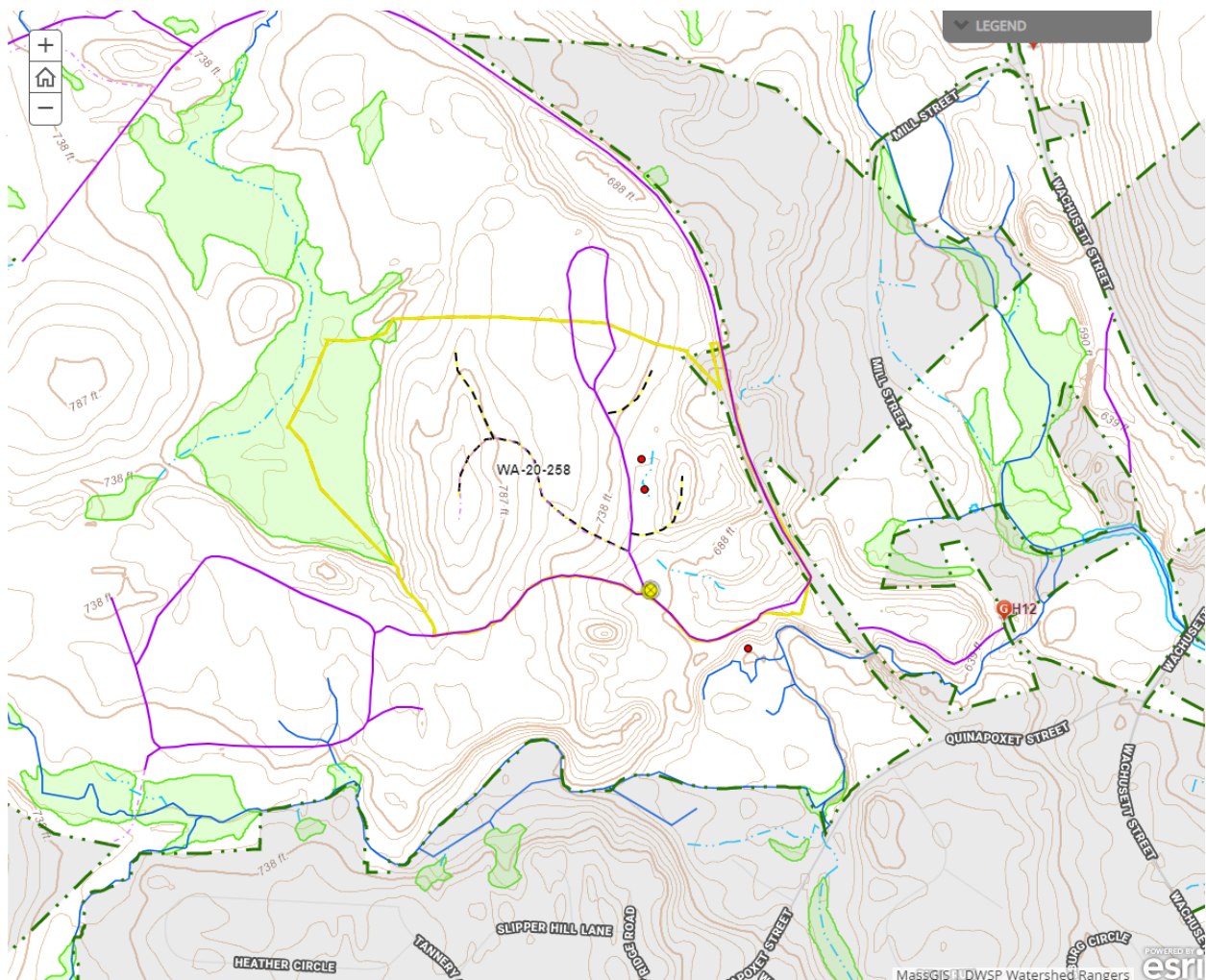
## Wetlands

- Wetlands present? - **Yes**
- Streams present? - **No**
- 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**
- Is logging in wetlands planned? - **No**

Bear Swamp is on the western edge of this proposed area, but no logging will occur in Bear Swamp.

Verified vernal pool #66 is in this area and there is another newly verified vernal pool just south in the same narrow, unmapped wetland at the western base of a steep-sided knoll.



## Silviculture

Acres in Intermediate cuts: **10**

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

Acres in Regeneration cuts: **24**

Average regen opening size: **1**

Maximum regen opening size: **2**

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

Adequate advance regeneration was present in 62% of the plots. These plots are well distributed throughout the proposed sale area with the exception of the west-facing slopes above Bear Swamp which are dominated by mountain laurel. The regeneration is comprised of white pine, black oak, white oak and red oak with lesser amounts of red maple, sassafras and black cherry. Interfering levels of native shrubs (primarily mountain laurel) were present in 30% of the plots.

### **General comments on silviculture proposed:**

With excellent advance regeneration present throughout this working unit, openings will be made on up to 24.2 acres thereby achieving the goal of creating a new age class on 1/3rd of this area. This will be accomplished by the removal of the overstory in patches that average about 1 acre with a maximum size of about 2 acres. These will be well distributed throughout the proposed area taking advantage of where the regeneration is best. Given the dry character of this area, openings will be located in order to take advantage of where white pine regeneration is present.

Some partial cutting may occur between the openings, however this will be restricted due to the presence of mountain laurel in so much of this working unit. Partial cutting only serves to encourage the dominance of mountain laurel in forest understories.

Following this cut, this working unit will have an approximate age structure as follows: 33%, 0-20 years old; 0%, 21-40 years; 1%, 41-60 years; 1%, 61-80 years; 2%, 81-100 years; 63%, >100 years old.



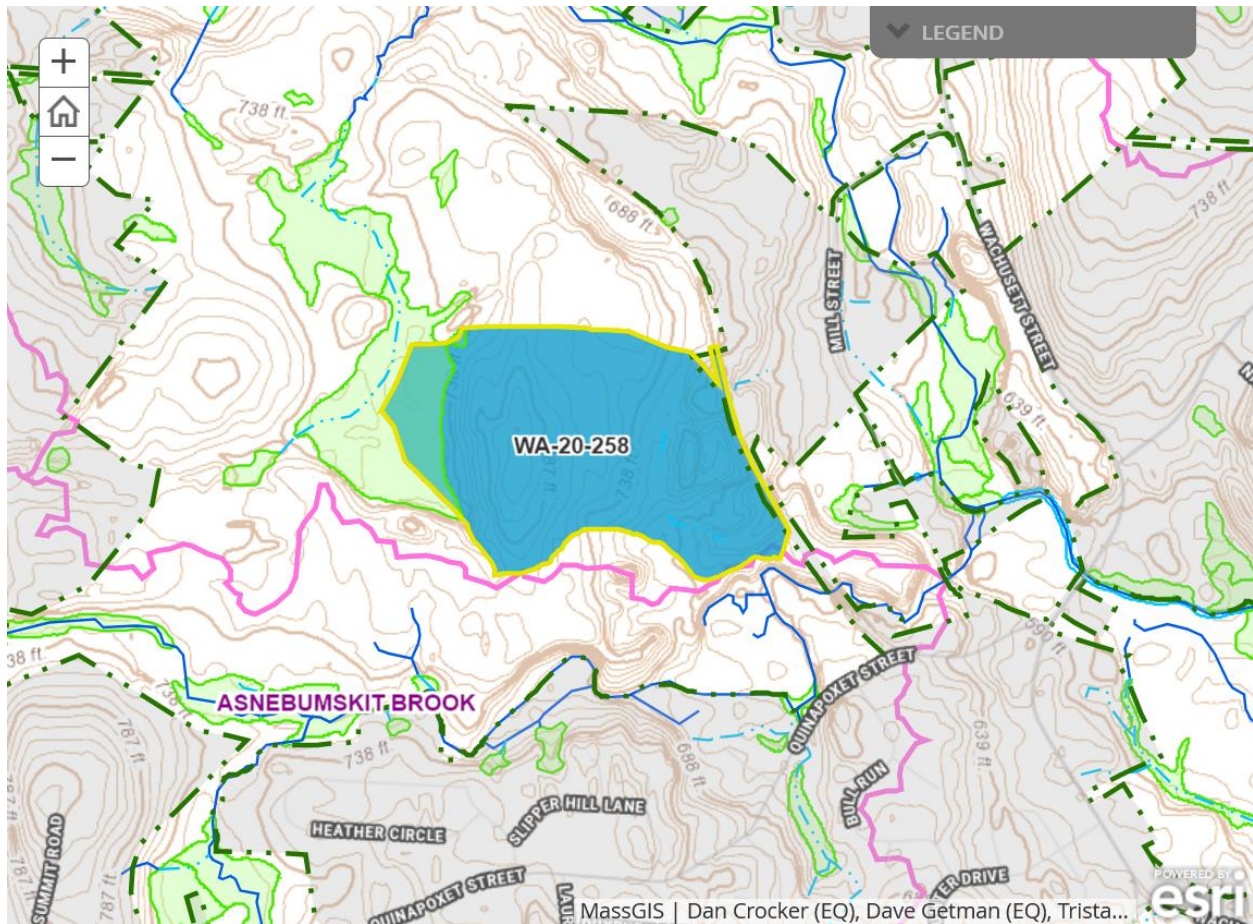


Subwatershed Analysis

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)	2462	78	538	73

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





## Harvesting Limitations

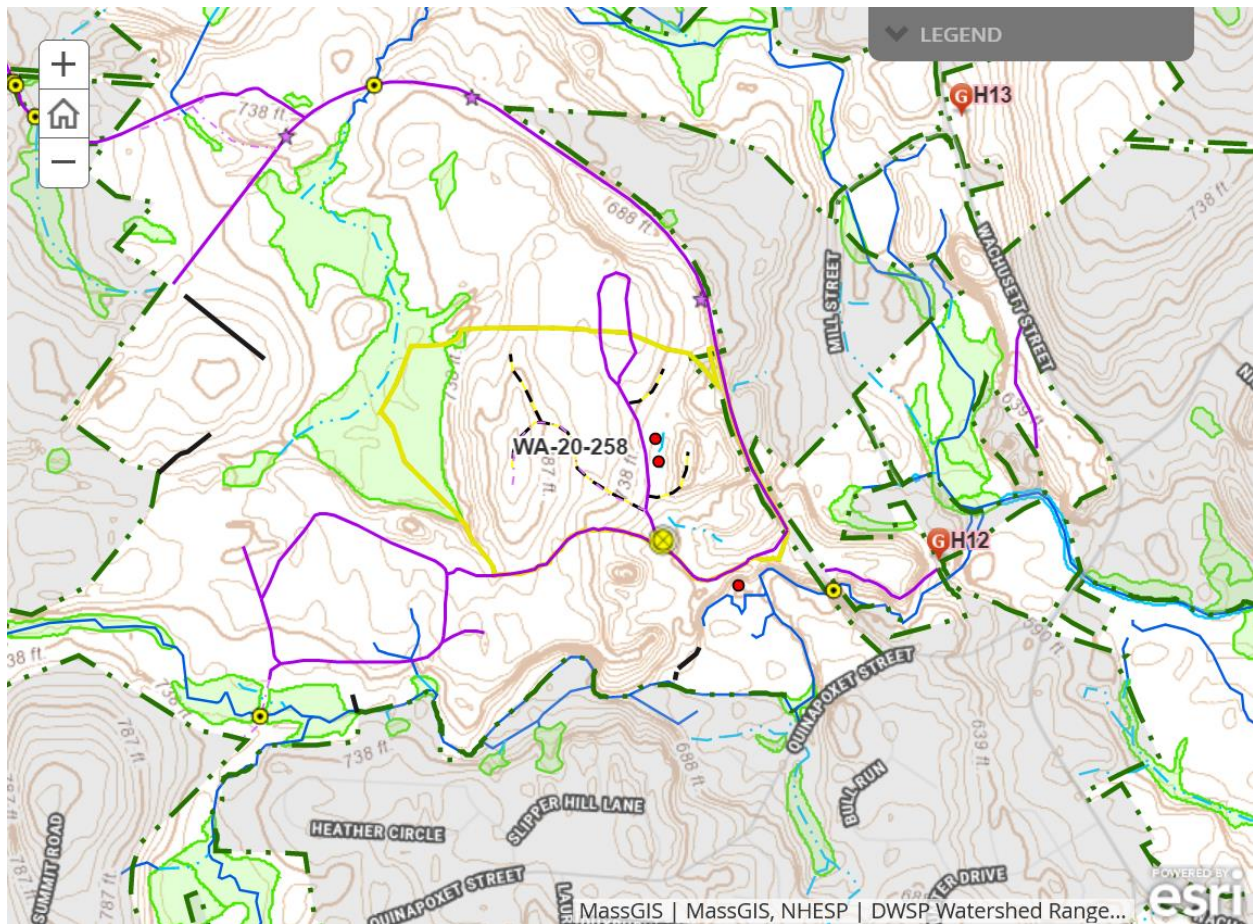
Forwarder required: **Yes**

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.

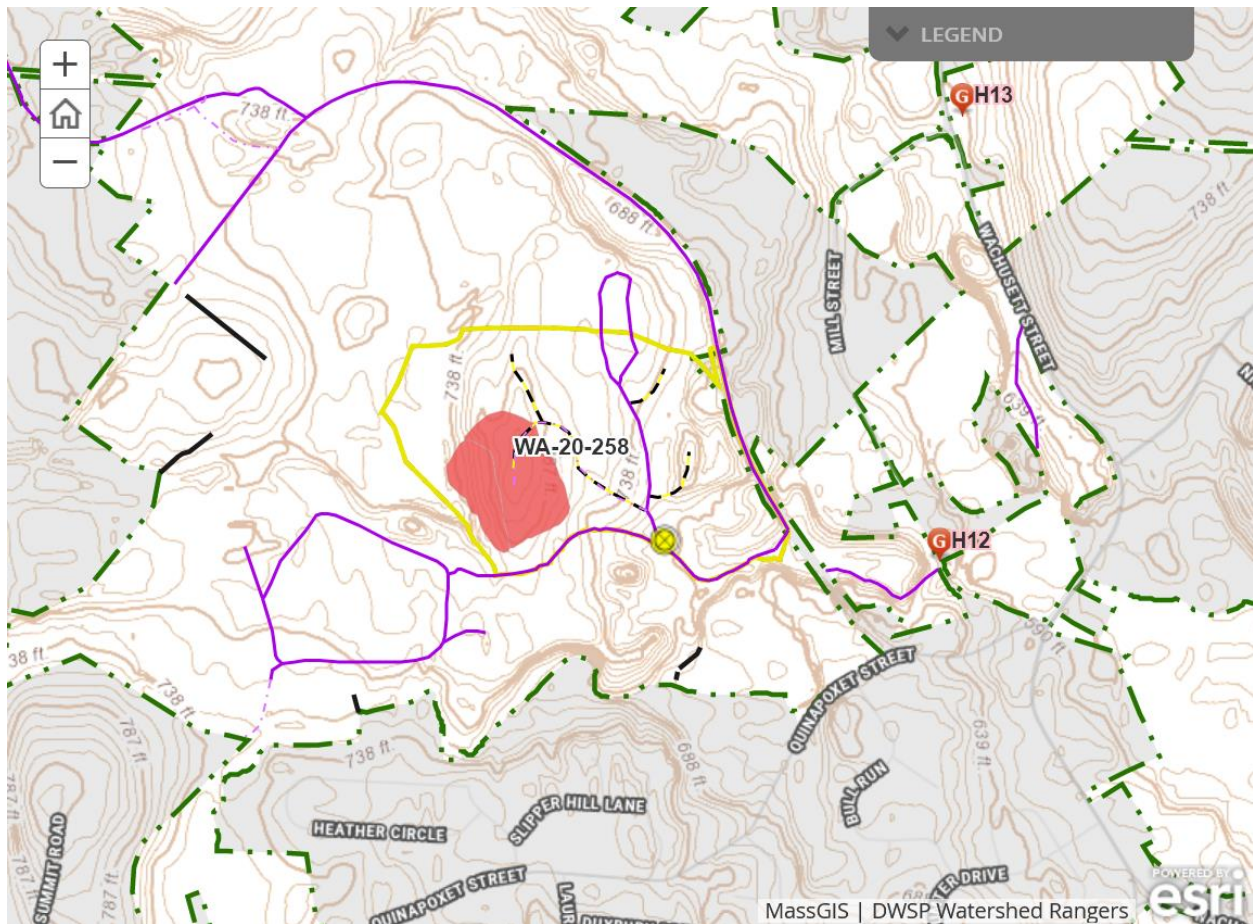


## Cultural Resources

### Comments on Cultural Resources:

This area has been assessed by the DCR Archaeologist for both known sites of cultural or archaeological importance as well as for potential use by pre-Contact Native Americans; none are known or documented, though the site is considered potentially sensitive for pre-Contact sites. DWSP will follow any additional recommendations from DCR's Archaeologist regarding protection of sensitive sites.





## Wildlife Resources & Rare and Endangered Species

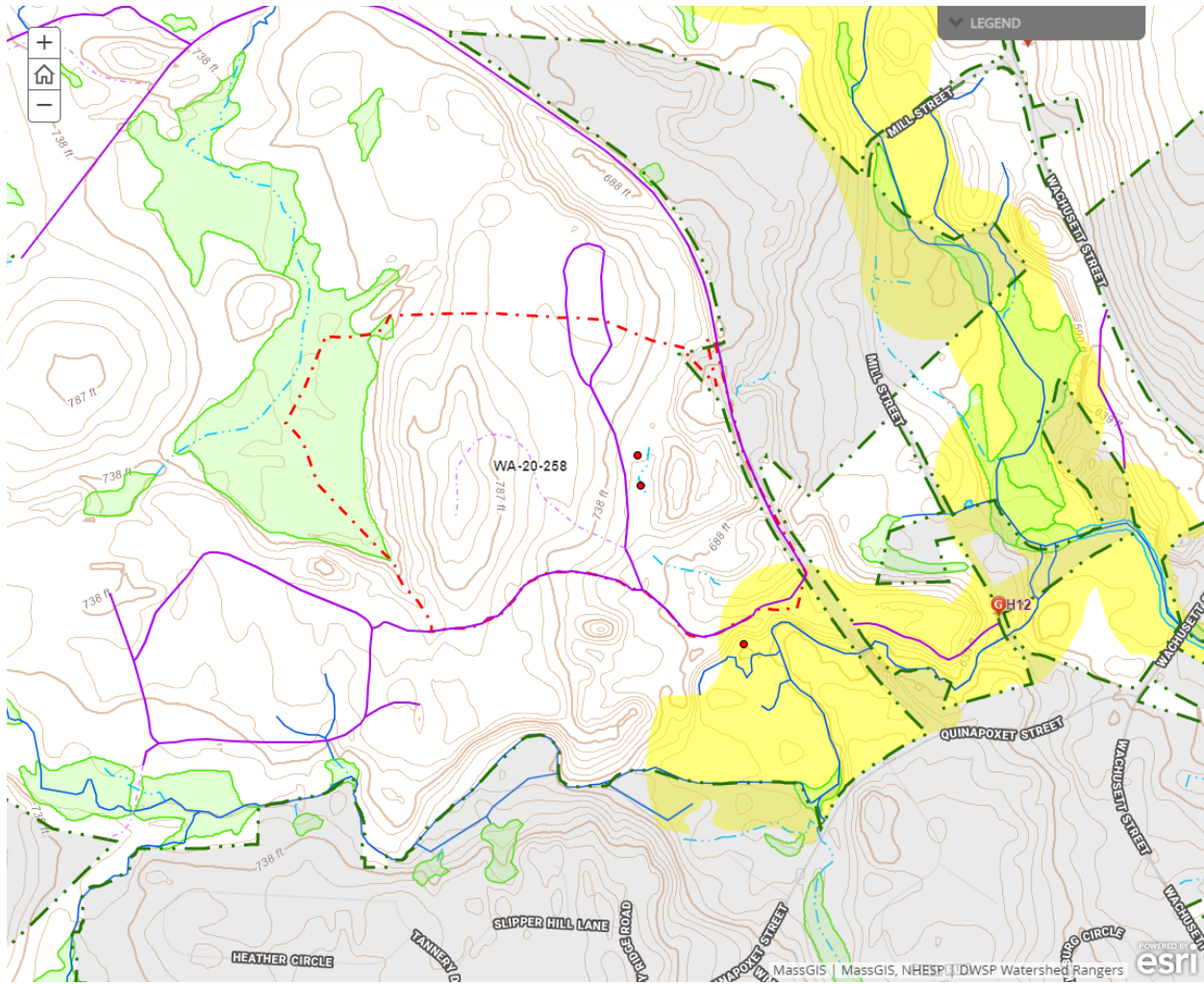
### General Wildlife Comments:

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:

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.

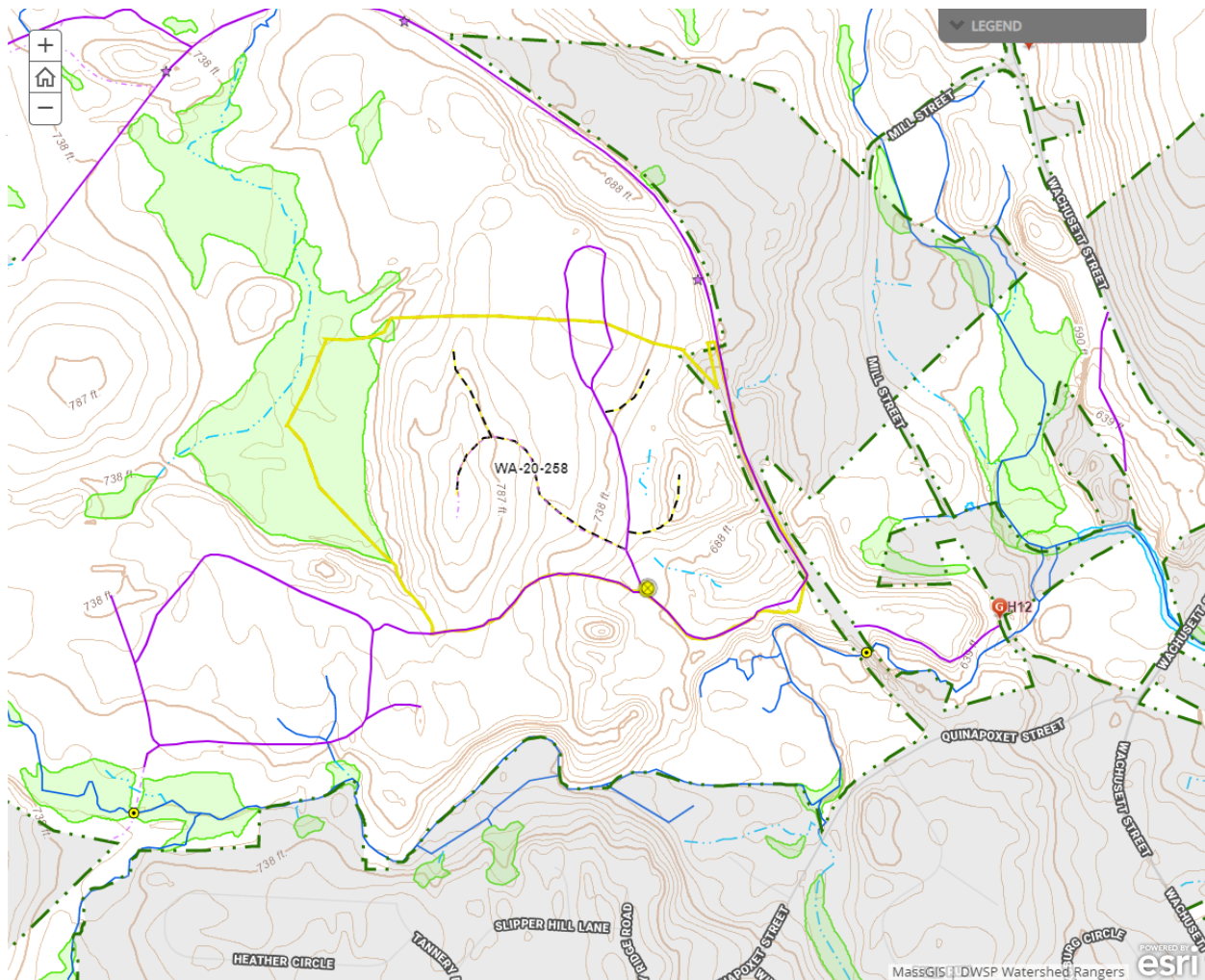


## Environmental Quality Engineering

### Comments on EQ Issues:

No stream crossings are planned, and no additional EQ comments.





## Forest Access Engineering

**Gravel needed:** No

**Landing work needed:** No

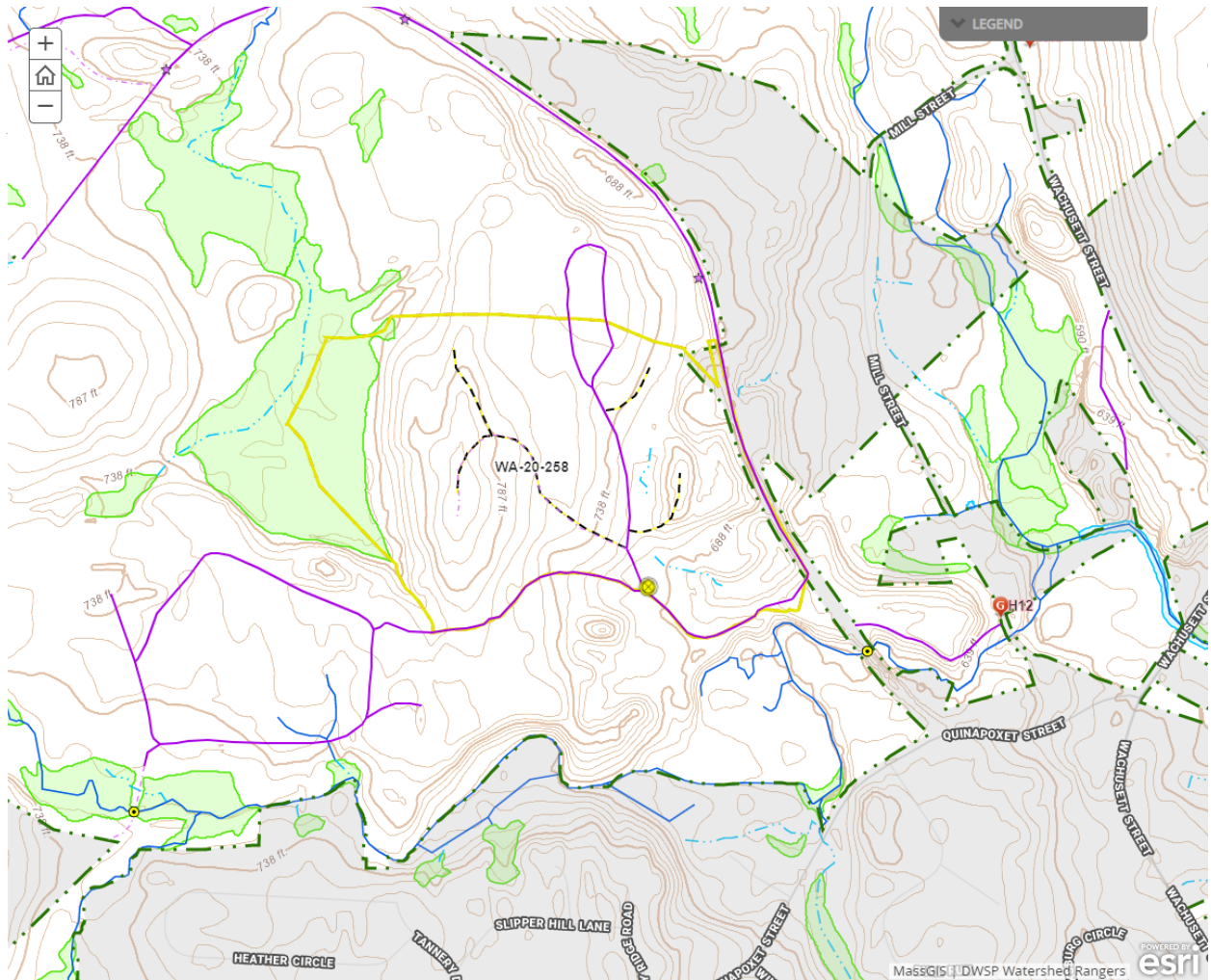
**Culverts needed:** No

**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 2020 Forestry Proposals – Master Legend for story maps

