Wachusett Harvest Proposal WA-20-215

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

This property was purchased by the MDC in 1997 (most of the property is in West Boylston). The east side of this working unit is bound by a very steep slope (30% and greater) that runs north-south; the south is bound in part by private property (the boundary has been blazed and tagged) and in part by a short paved dead-end extension off of Malden St. in Holden; the west side is bound by Rt. I190 and the north side is an arbitrary interior east-west line that connects to a property corner along a stone wall.

Total Acres: 62

General Description

	Overstory Type(s)	Acres
Dominant	Oak, mixed - dry site	41
Secondary	White pine/oak	21

	Understory Type(s)

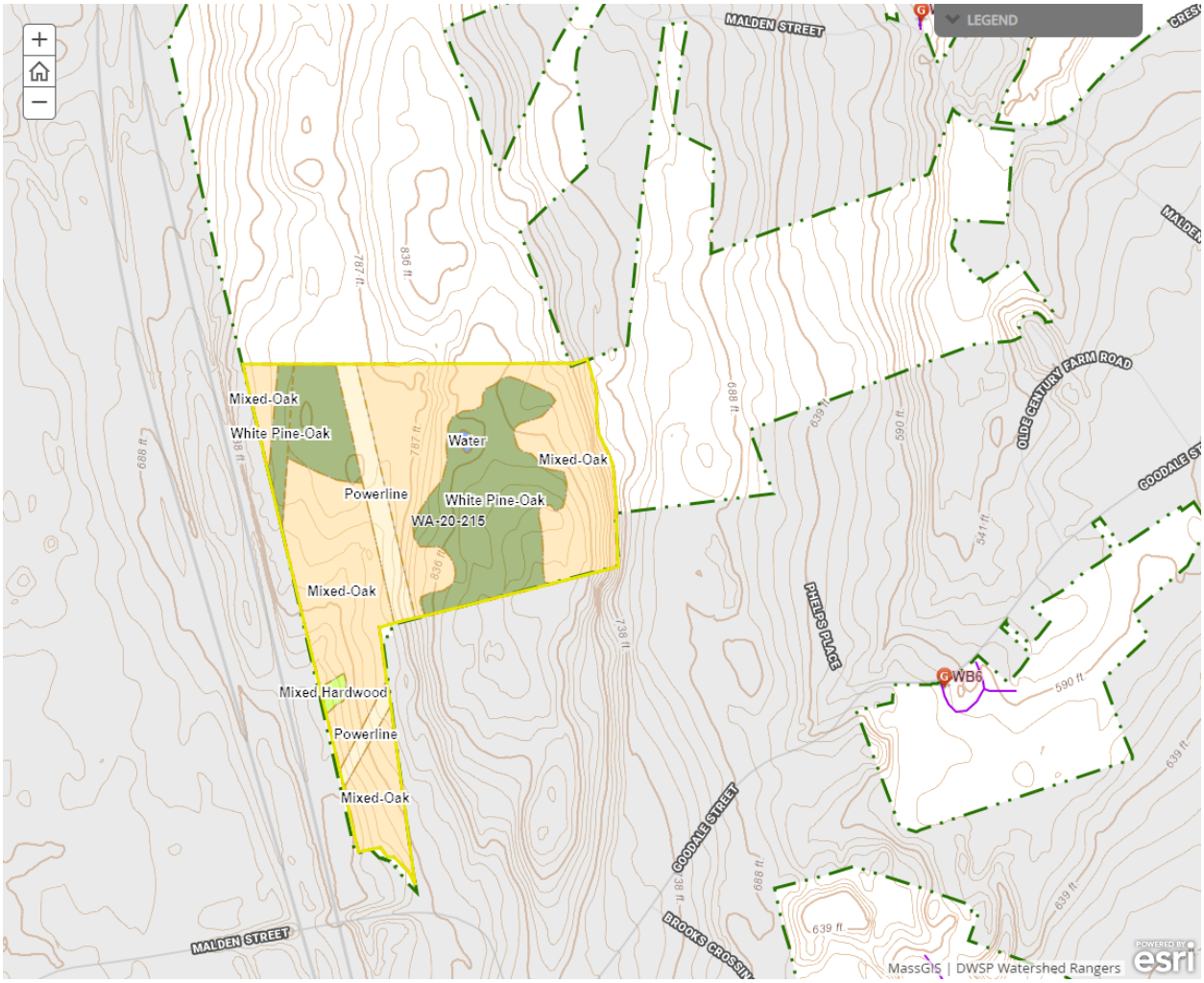
Dominant	Tree seedlings/saplings dominate site
Secondary	Dry site - blueberry/huckleberry

Description of forest composition/condition:

The working unit was proposed, marked, sold and cut in 2010. At that time, there was no advance regeneration in the mixed oak stand while there was decent regeneration in the white pine-oak stand on the top of the hill. While the proposal in 2010 call for the creation of some overstory openings in the white pine-oak stand, in the end, the decision was made to not make any openings. The white pine-oak stand was treated essentially the same as the mixed oak stand. Overall stocking was decreased by roughly 30% while every white pine in the overstory was daylighted by removing all trees from their immediate vicinity. All of this was done to encourage the establishment of white pine regeneration on this very dry site. This operation was successful and today there is excellent advance regeneration of white pine throughout this area.
The age structure for this working unit is as follows: 0%, 0-20 years old; 3%, 21-40 years; 0%, 41-60 years; 39%, 61-80 years; 58%, 81-100 years, 0%, >100 years old.

Assessment of Terrestrial Invasive Species:

Sampling did not find any invasive plant species in the 134 plots taken.
Given the number of egg masses present, defoliation by gypsy moths is expected to be significant this year.

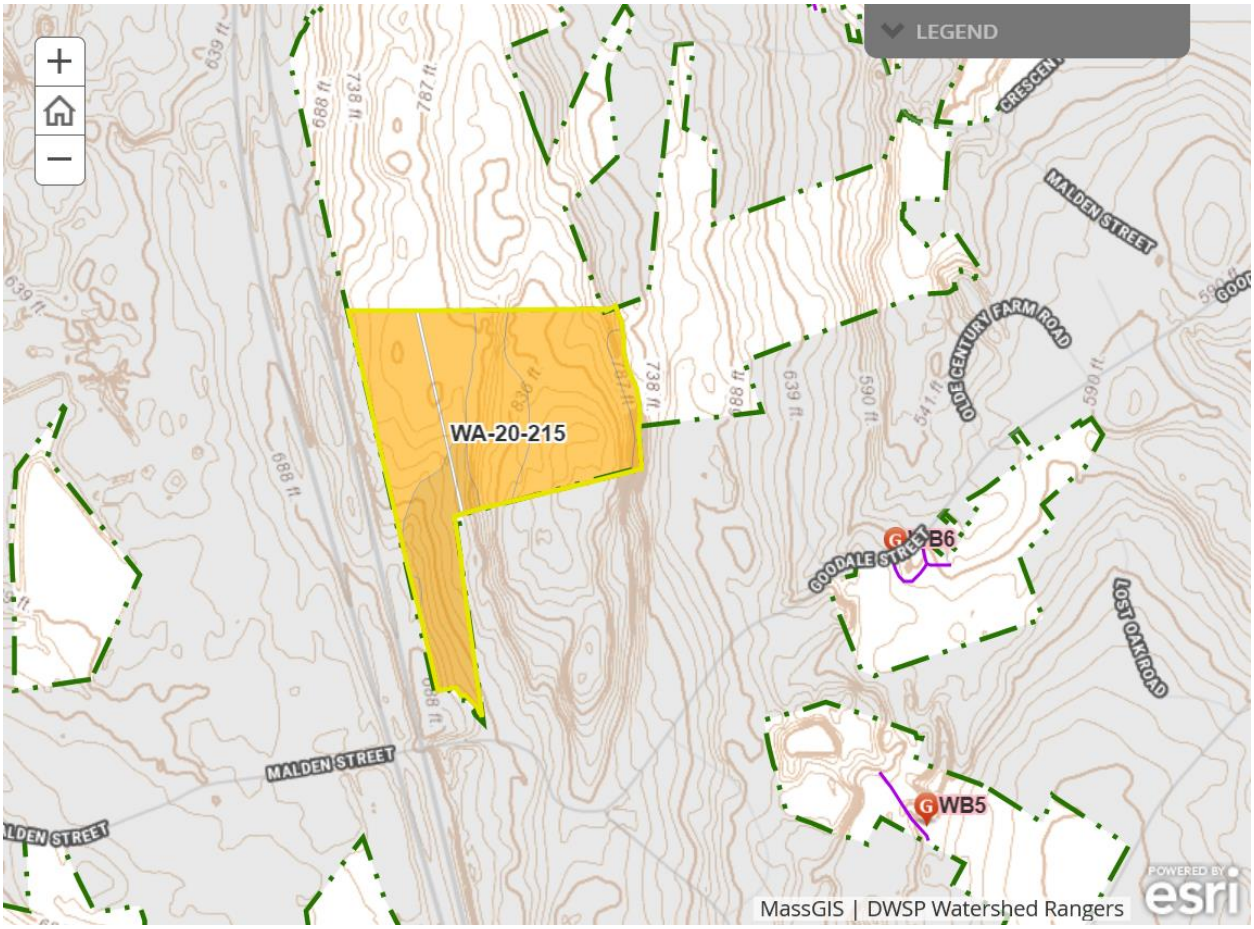


Soils

Drainage Class	%
Excessively Drained	0
Well Drained Thin	81
Well Drained Thick	19

Moderately Well Drained	0
Poorly to Very Poorly Drained	0

The well-drained thin soil is the Chatfield-Hollis-Rock outcrop complex. The well-drained thick soil is the Canton fine sandy loam.

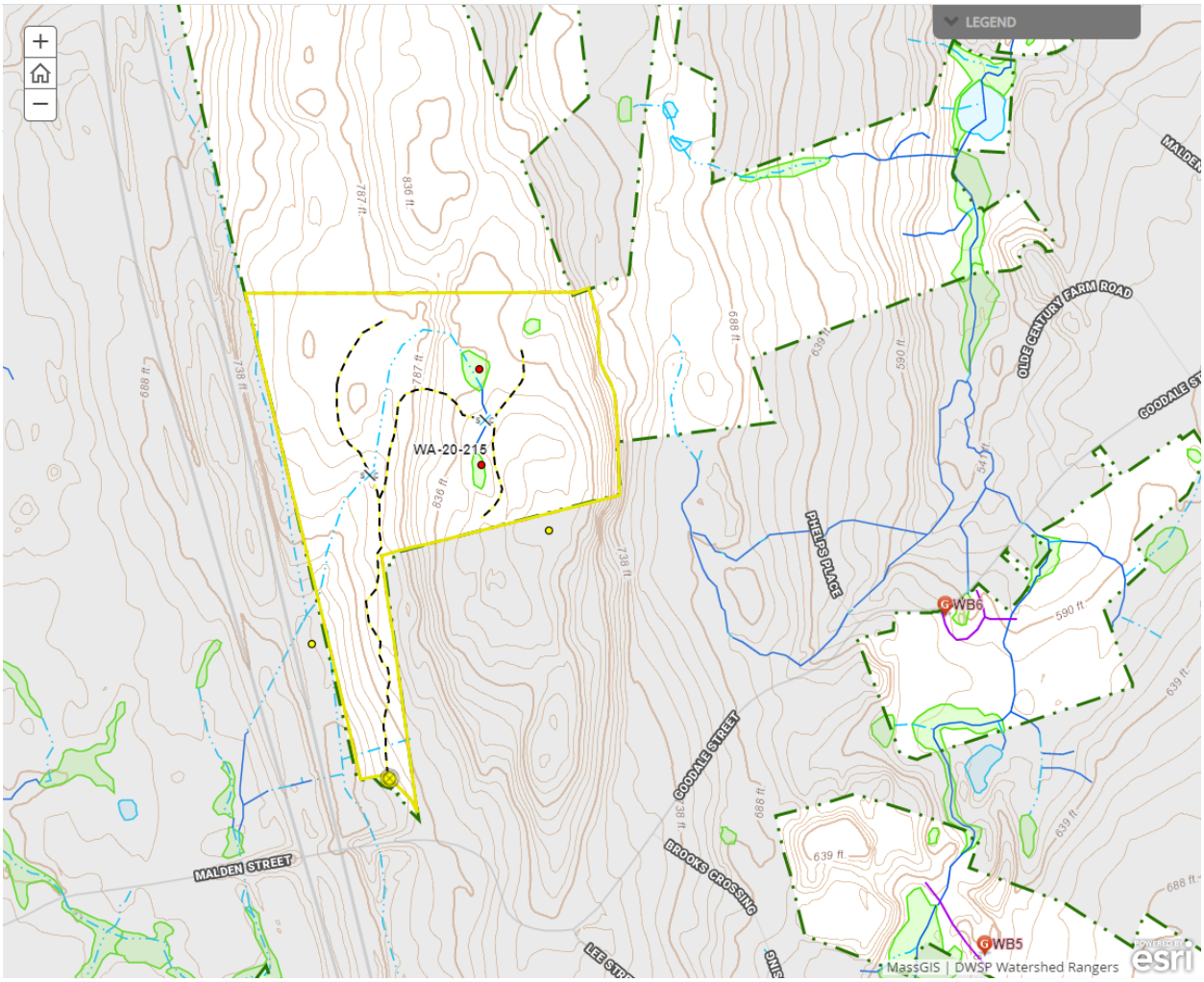


Wetlands

- Wetlands present? - **Yes**
- Streams present? - **Yes**
- Vernal pools present? - Yes
- Seeps present? - **None known**
- Are stream crossings required? - **Yes**

- Are wetland crossings required? - **No**
- Is logging in filter strips planned? - **Yes**
- Is logging in wetlands planned? - **No**

There are two small wetlands on the top of the hill connected by a small brook that then flows north before curving to the southwest. These two wetlands also contain verified vernal pools #129 and #130. There is also an unmapped small intermittent stream in the far south end of the area.



Silviculture

Acres in Intermediate cuts: 2**0**

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

Acres in Regeneration cuts: **21**

Average regen opening size: **1**

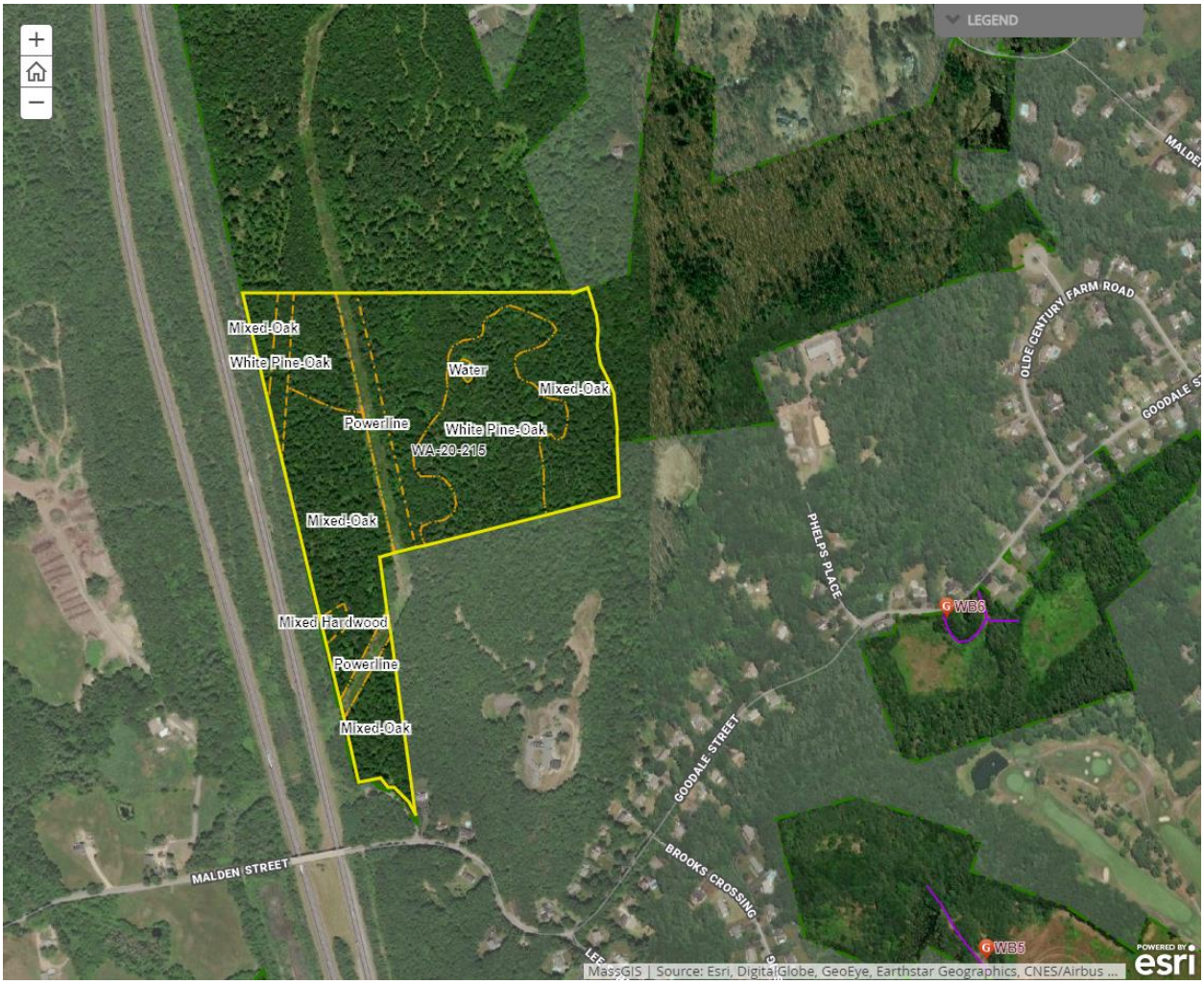
Maximum regen opening size: **2**

Description of advance regeneration in proposal area:

Sampling found adequate advance regeneration in 51% of the plots with marginal regeneration present in an additional 26%. White pine was present in 63% of the plots. Overall, the regeneration is comprised of white pine, red maple, white oak, black oak and red oak with less amounts of black birch, sassafras and chestnut. Where advance regeneration is not present, interferring levels of mountain laurel or witchhazel are usually present.

General comments on silviculture proposed:

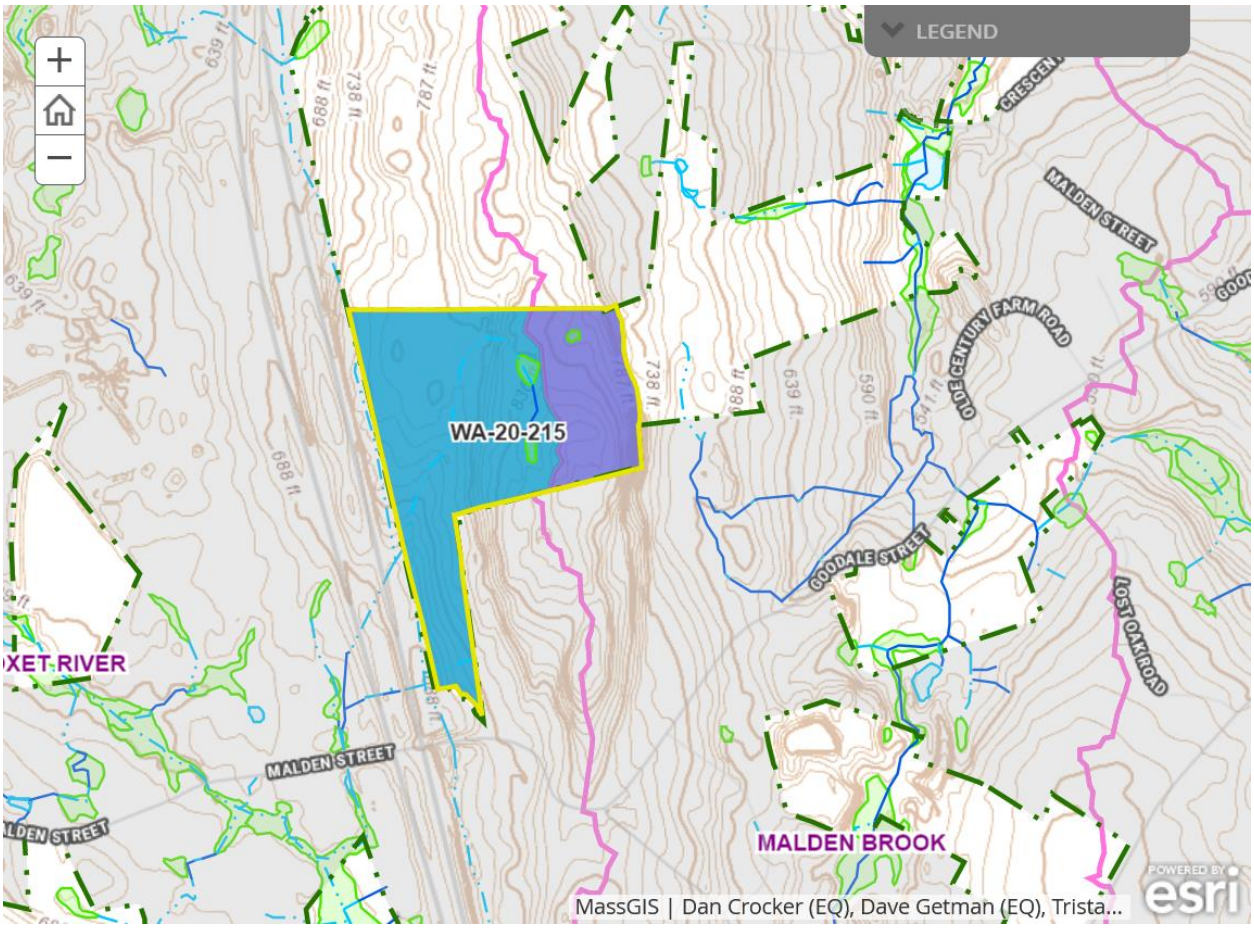
With adequate advance regeneration now present throughout this working unit as a result of the harvest in 2010, openings will be made on up to 20.6 acres thereby achieving the goal of creating a new age class on 1/3rd of this area. This will be accomplished by the removal of the overstory in patches 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 white pine regeneration is best.
Any partial cutting that may occur between the openings on up to 1/3rd of the area will be focused on benefiting white pine.
Following this cut, this working unit will have an approximate age structure as follows: 33%, 0-20 years old; 3%, 21-40 years; 0%, 41-60 years; 0%, 61-80 years; 64%, 81-100 years; 0%, >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	46
11 (Malden Brook)	481	5	115	16

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



Harvesting Limitations

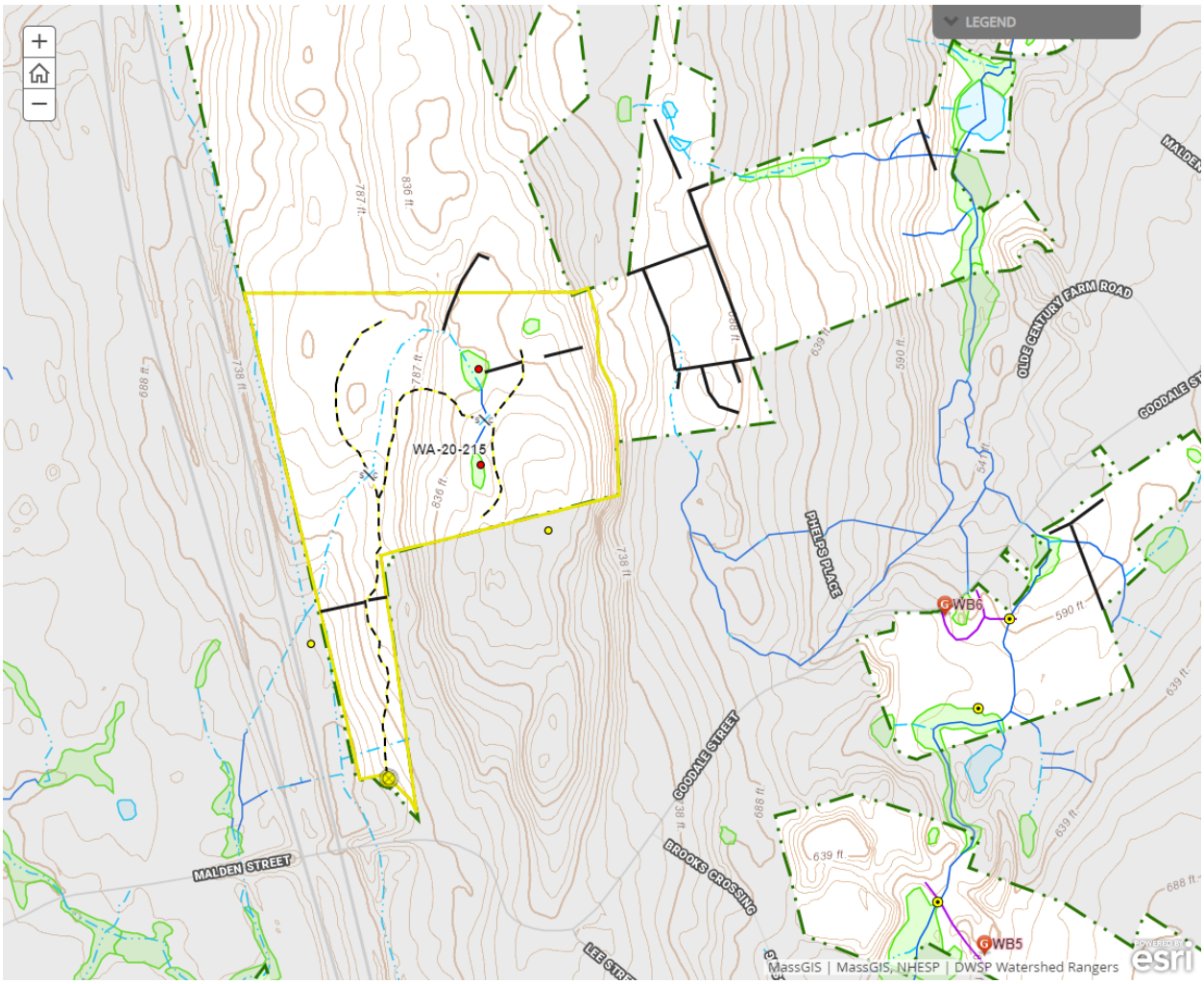
Forwarder required: **Yes**

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.

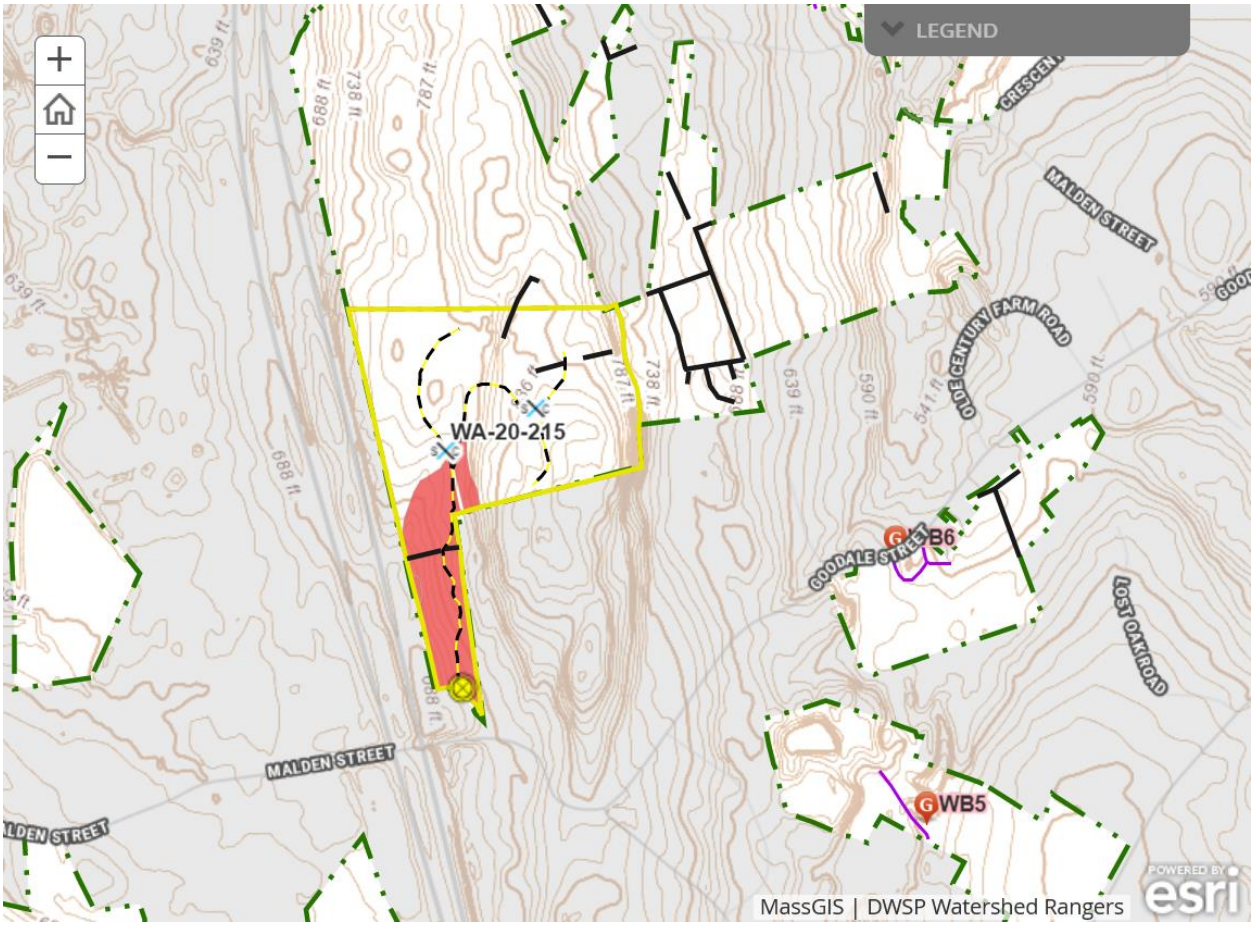


Cultural Resources

Comments on Cultural Resources:

Each of the two small wetlands has a small concrete weir with a v-notch that in the past would have allowed more water to be held in the wetlands. This was done to provide water for steam engines used in the quarrying activities that took place in the granite outcrops on this hilltop. The weirs do not currently affect the water flow out of the wetlands.

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.



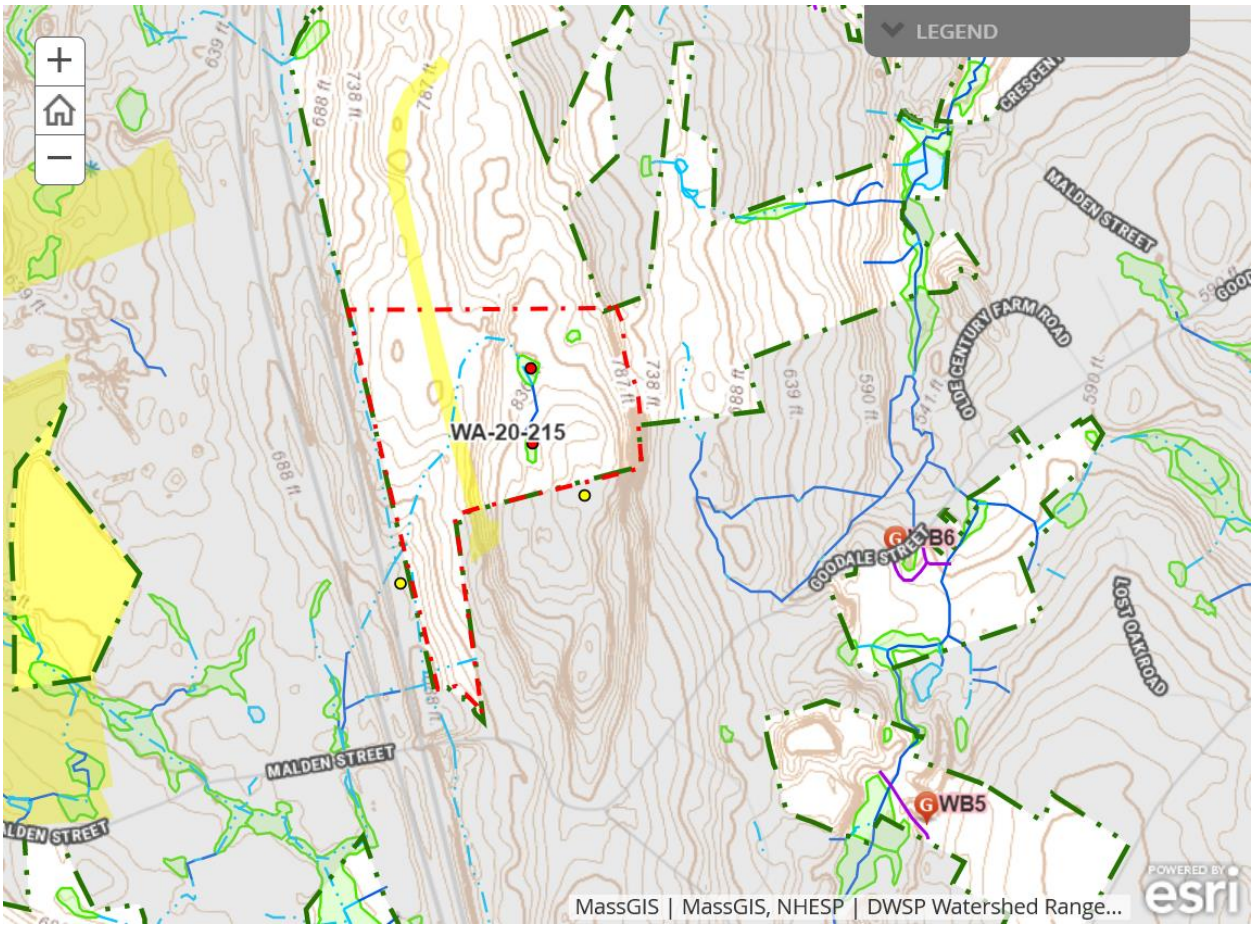
Wildlife Resources & Rare and Endangered Species

General Wildlife Comments:

As a result of the proposal of this working unit in 2010, the two vernal pools (#129 & 130) have been verified.

Comments on Rare Species/Habitats:

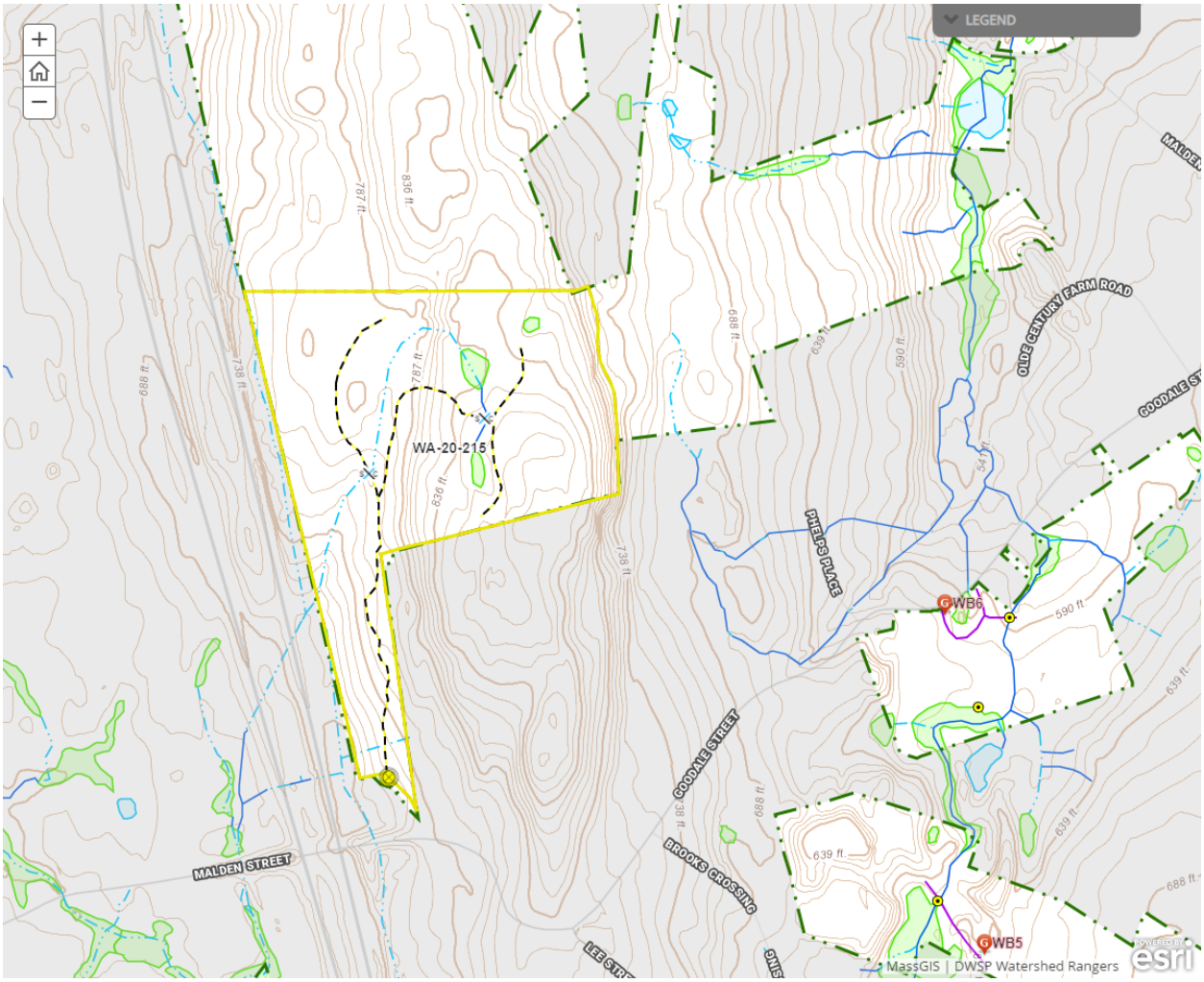
NHESP has determined that certain state-listed sensitive species or habitats may exist within the lot proposal area. To protect them from unnecessary disturbance, detailed information regarding affected species and their locations is not included in this report. DWSP will coordinate with NHESP and follow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



Environmental Quality Engineering

Comments on EQ Issues:

Both stream crossings will occur in the same locations as in 2010.



Forest Access Engineering

Gravel needed: No

Landing work needed: No

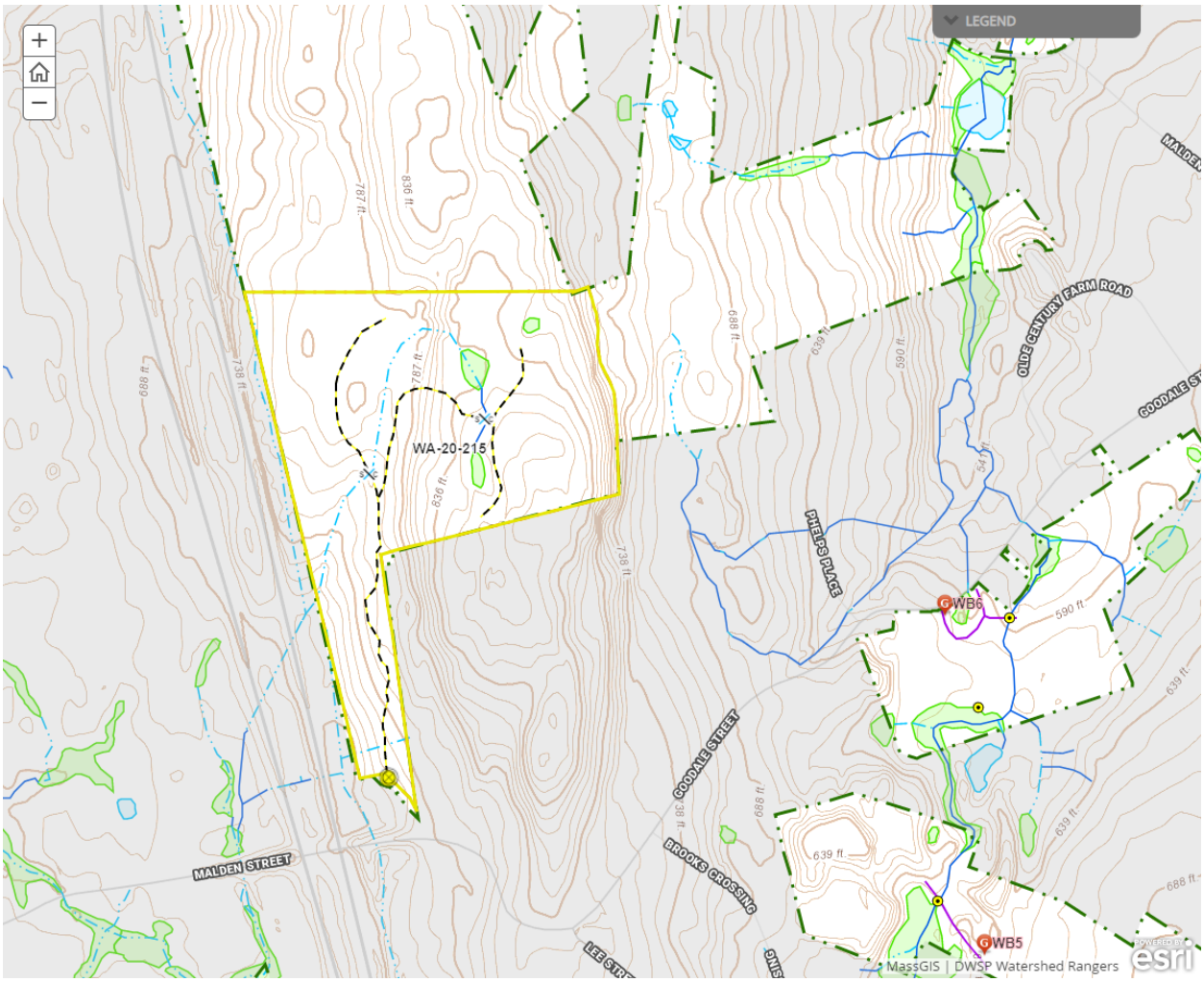
Culverts needed: No

Work needed on permanent bridges: No

Beaver issue: No

Further comment on access needs:

None.


LEGEND
WA-20-215
MALDEN STREET
GOODALE STREET
BROOKS CROSSING
PHELPS PLACE
OLDE CENTURY FARM ROAD
WB6
WB5
MassGIS | DWSP Watershed Rangers
esri

DWSP FY 2020 Forestry Proposals – Master Legend for story maps