Wachusett Harvest Proposal WA-22-312

Proposal Update, May 2024:

This forestry proposal was originally approved through the public process in 2021. The project was 'paused' along with most other state lands forestry projects as part of the EEA Forests as Climate Solutions Initiative. Following the close of the work of the Climate Forestry Committee, DWSP determined the activities in this proposal align with EEA climate considerations developed from the recommendations in the CFC report. The proposal language and mapping below are preserved unchanged from that presented to the public in 2021 in ArcGIS Online Story Map format.

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, canopy openings in this hardwood forest will be made to advantage of the good hardwood understory.

Proposal Location

Located in Holden. The northern side of this proposed sale area is bound by an interior woods road; the east side by Mason Road; the south side by property boundary line, much of which is stone wall; and the west side is bound primarily by internal stone walls.

Total Acres: 37

General Description

	Overstory Type(s)	Acres
Dominant	Mixed hardwoods	26
Secondary	White pine - oak	5
Other	White pine - hardwood	2

	Understory Type(s)
Dominant	Tree seedlings/saplings dominate site
Secondary	Mesic site - witch hazel, highbush blueberry

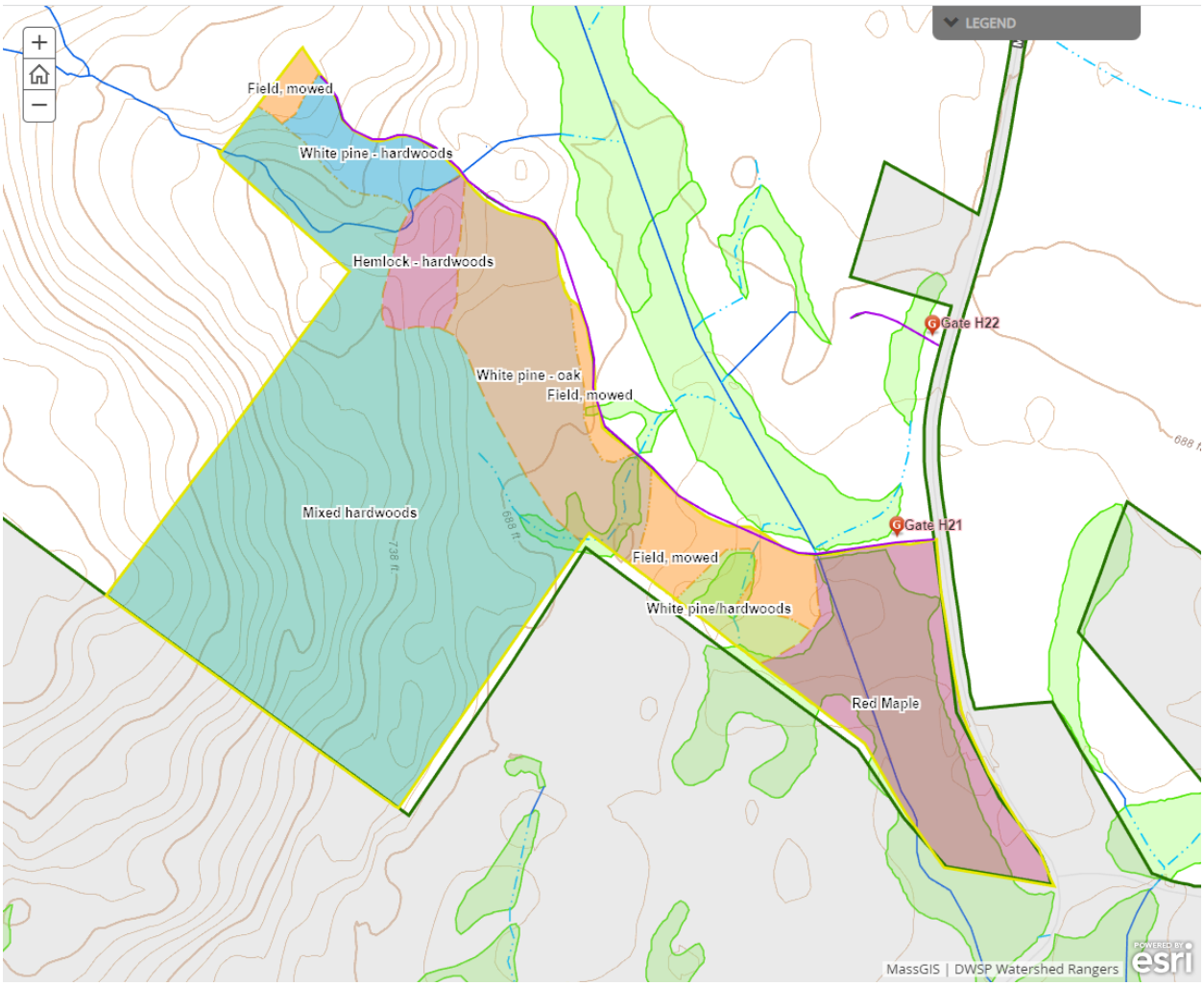
Description of forest composition/condition:

The mixed hardwood stand that covers the majority of this area is comprised of hickory, red maple, red oak, black birch, white ash, some scattered white pine and even a few basswood. The understory is dominated by tree seedlings and saplings along with hazelnut, maple-leaved viburnum (much of it very tall) and grape. There is notably less striped maple than in the understory of the other stands at the bottom of the hill. The significantly younger white pine-oak stand at the bottom of the hill to the east is comprised of white pine, red oak, white oak, red maple and black birch. A small area of hemlock-hardwood adjacent to the stream is notable for the significant decline of the hemlock due to the hemlock wooly adelgid. Essentially all of the hemlock is either dead or dying.

The age structure of this working unit is as follows; 0%, 0-20 years old; 0%, 21-40 years; 0%, 41-60 years; 19%, 61-80 years; 25%, 81-100 years and 56%, >100 years old.

Assessment of Terrestrial Invasive Species:

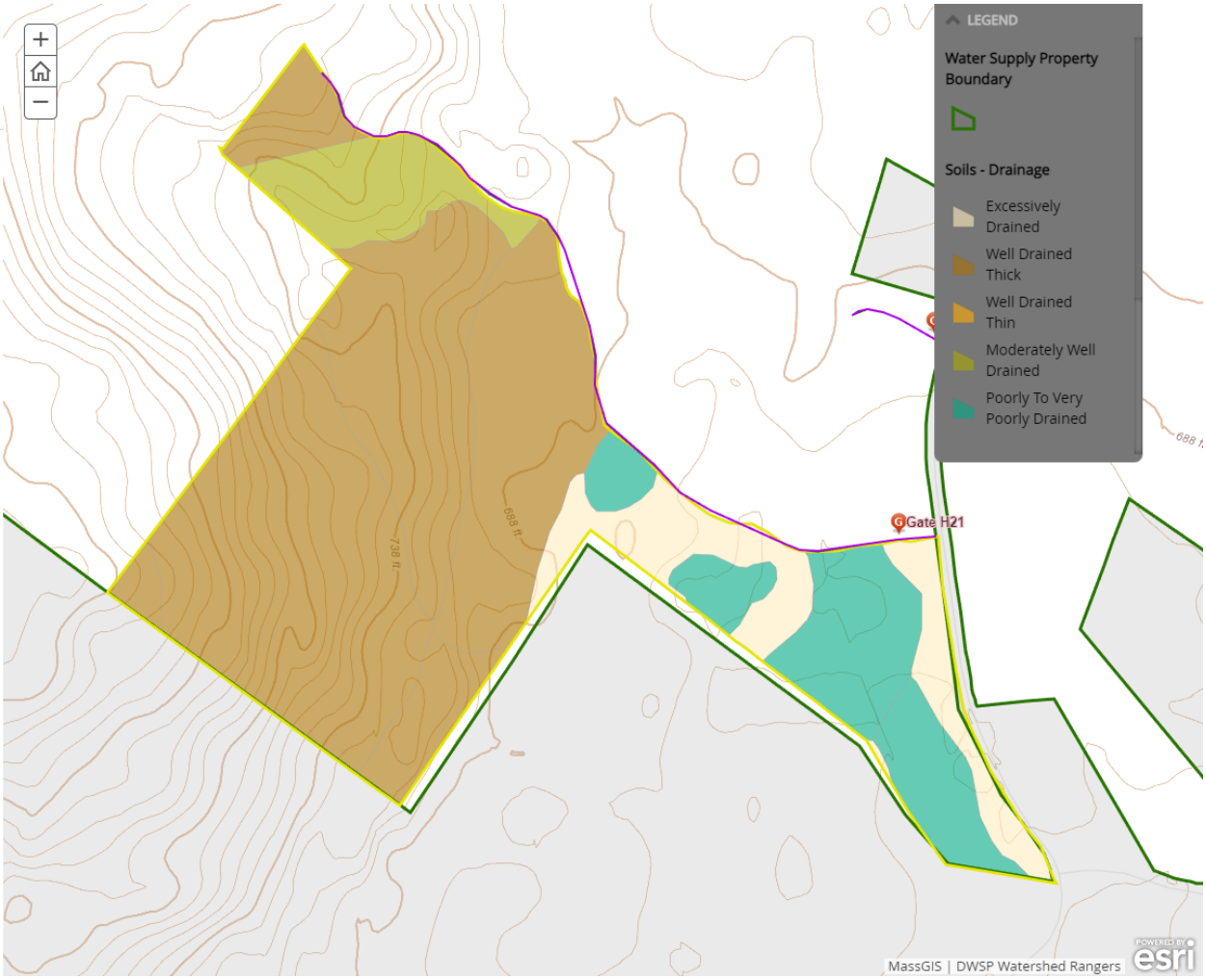
While none of the 73 sample plots had any terrestrial invasive species present, multiflora rose and autumn olive were observed adjacent to the small wetland near the road through the fields.



Soils

Drainage Class	%
Excessively Drained	7
Well Drained Thin	0
Well Drained Thick	82
Moderately Well Drained	9
Poorly to Very Poorly Drained	2

The excessively-drained soils are Merrimac fine sandy loam and the Hinckley sandy loam.
The well-drained thick soils are the Canton fine sandy loam, extremely stony and the Paxton fine sandy loam, extremely stony. These are the soils on the hillside where most of the management activities will occur.
The moderately well-drained soil is the Woodbridge fine sandy loam, extremely stony.
The poorly and very poorly-drained soils are the Walpole fine sandy loam and Freetown muck, both of which are associated with the wetland in the southeast corner of this area where management activities are not anticipated to occur.



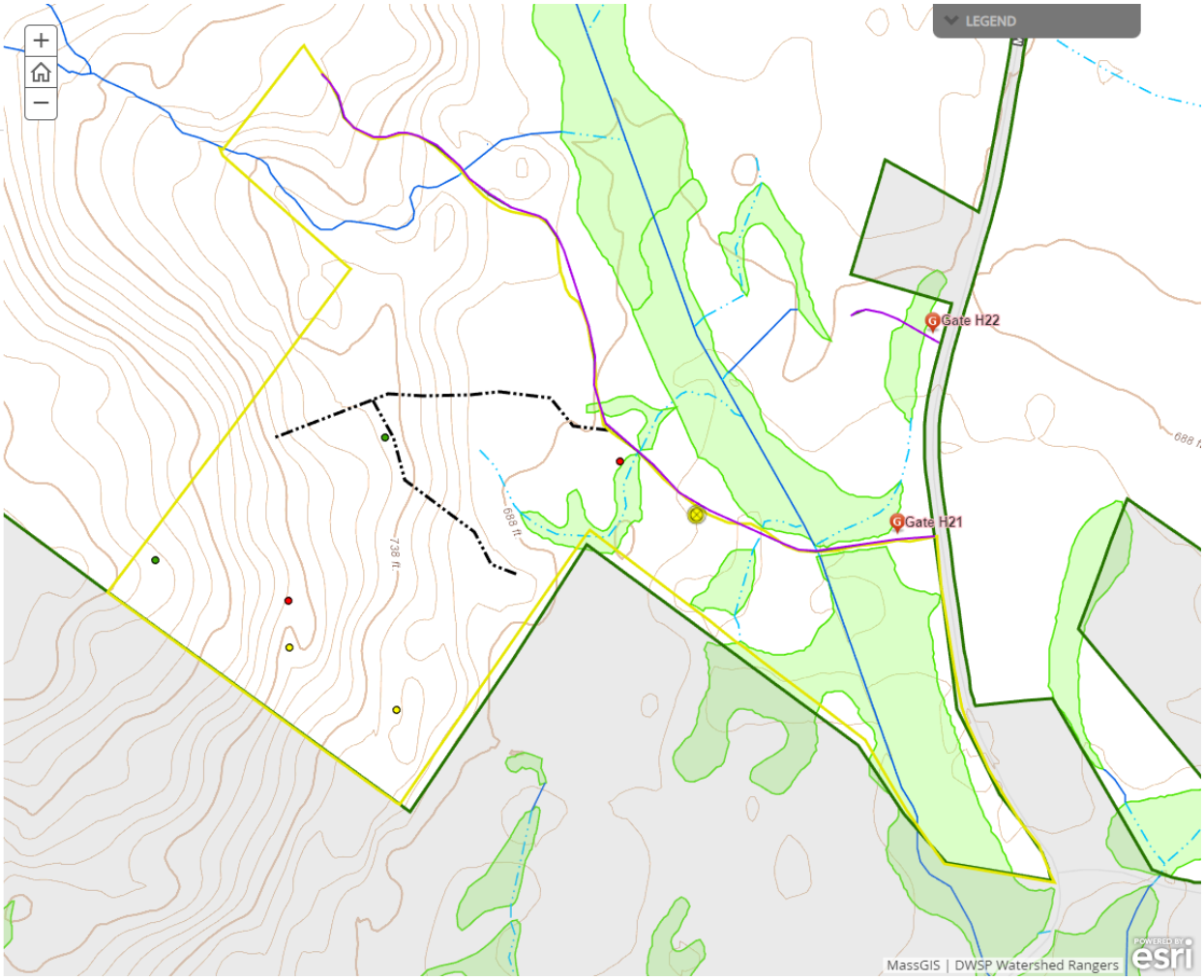
Wetlands

- 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**

There's an intermittent stream in the north end of this area. This is the same stream where a weir has been installed as part of the long-term forestry sub-watershed study. If any management activities occur in the few acres north of this stream, access will occur via the existing road.

One verified vernal pool and two potential vernal pools have been identified within the forested area of this working unit.



Silviculture

Acres in Intermediate cuts: **0**

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

Acres in Regeneration cuts: **12**

Average regen opening size: **1**

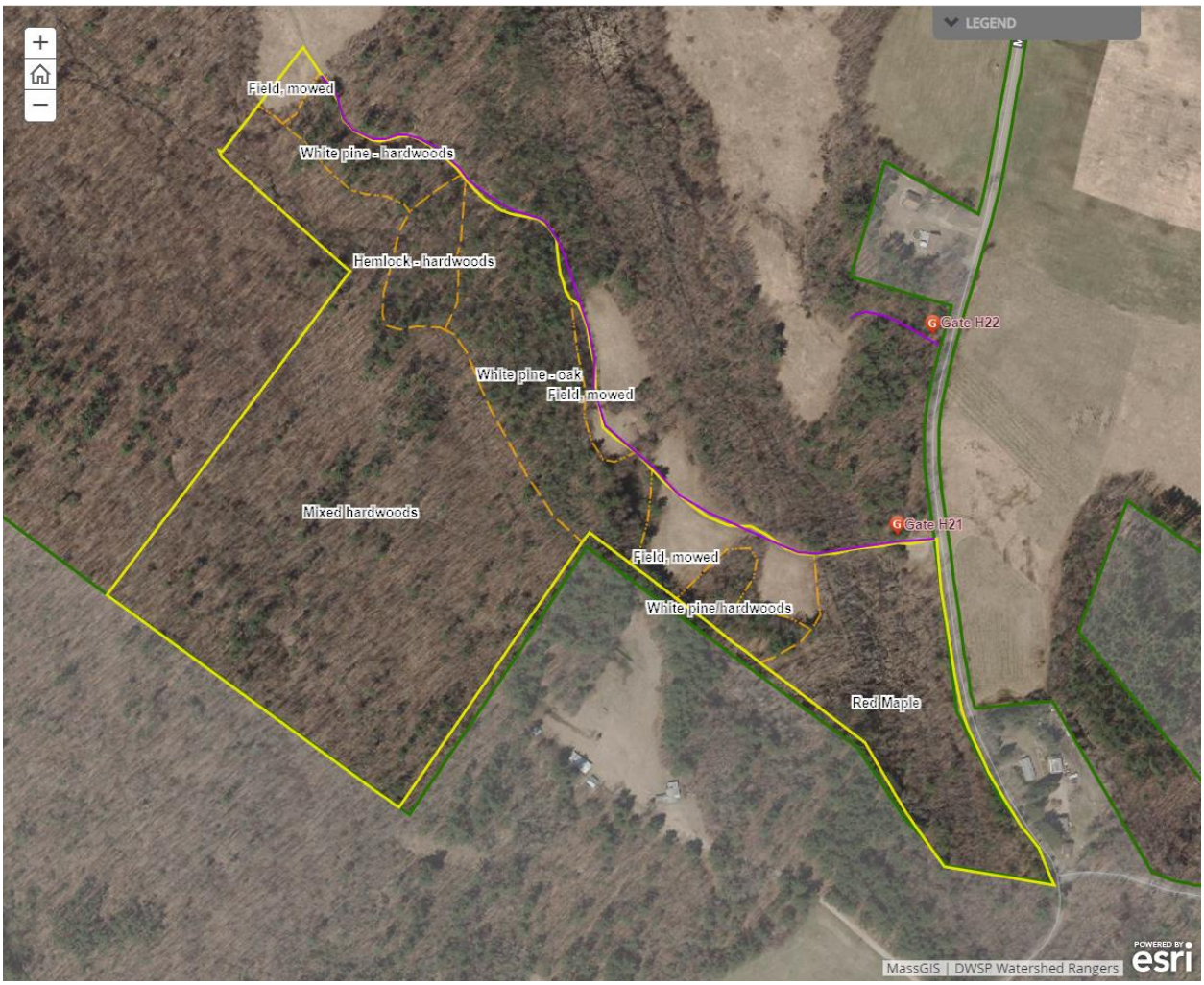
Maximum regen opening size: **2**

Description of advance regeneration in proposal area:

Sampling found adequate regeneration present in 48% of the plots with marginal regeneration in an additional 20% of the plots. 34% of the plots had oak present. The regeneration is dominated by white ash, red maple and red oak along with black birch, hickory, hophornbeam, white pine, hemlock and sugar maple.

General comments on silviculture proposed:

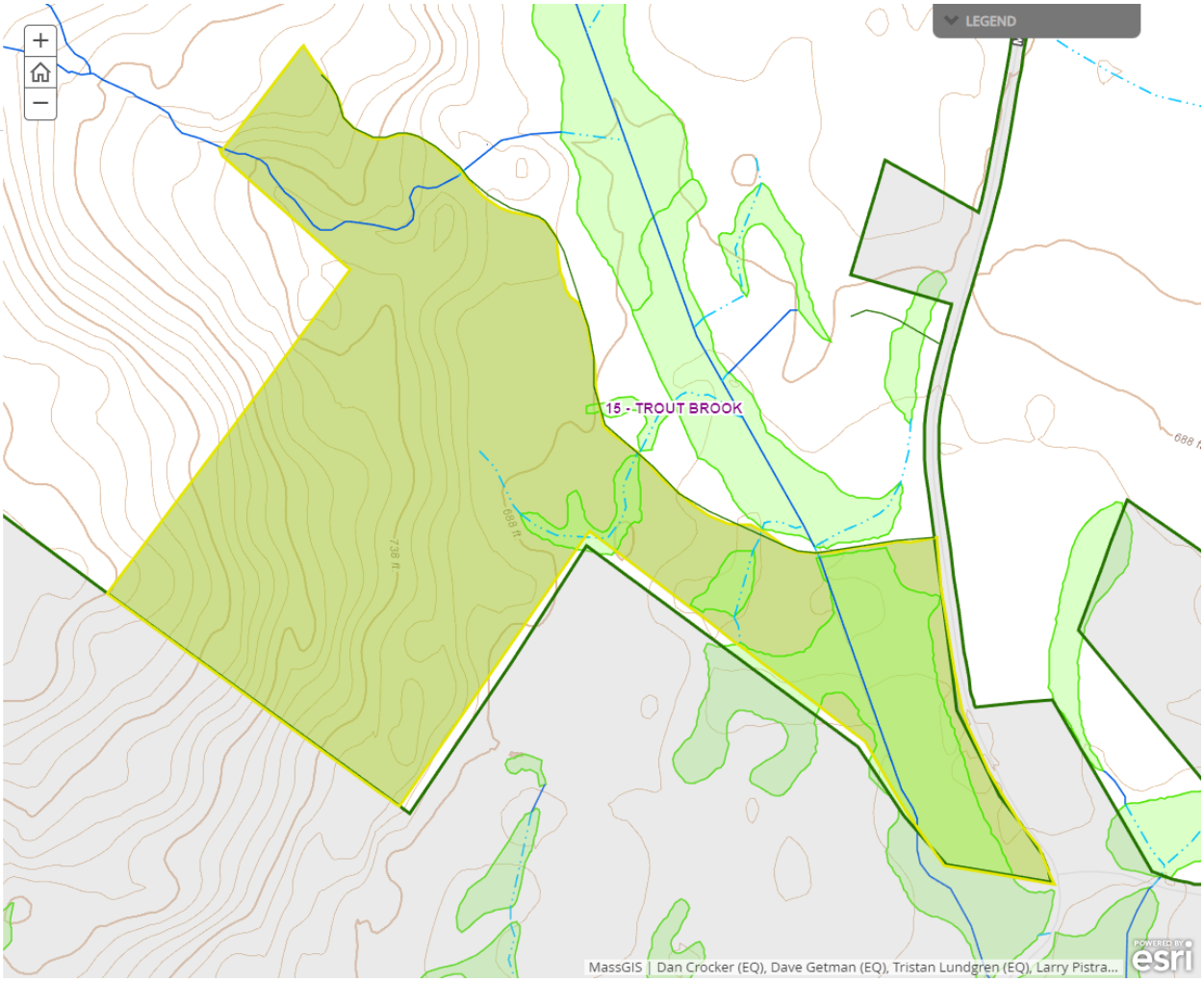
With good advance regeneration present comprised of a diversity of species well suited to this site, the goal will be to make openings that total about 12 acres. This will result in a new age cohort within the forest that makes up about 1/3rd of the area of this working unit. These openings will be well distributed throughout the area taking advantage of where the advance regeneration is best. Following the harvest, the age structure of the forest is anticipated to be approximately as follows; 33%, 0-20 years old, 0%, 21-40 years; 0%, 41-60 years; 13%, 61-80 years; 1%, 81-100 years and 53%, >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
15 (Trout Brook)	1058	55	1003	37

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



Harvesting Limitations

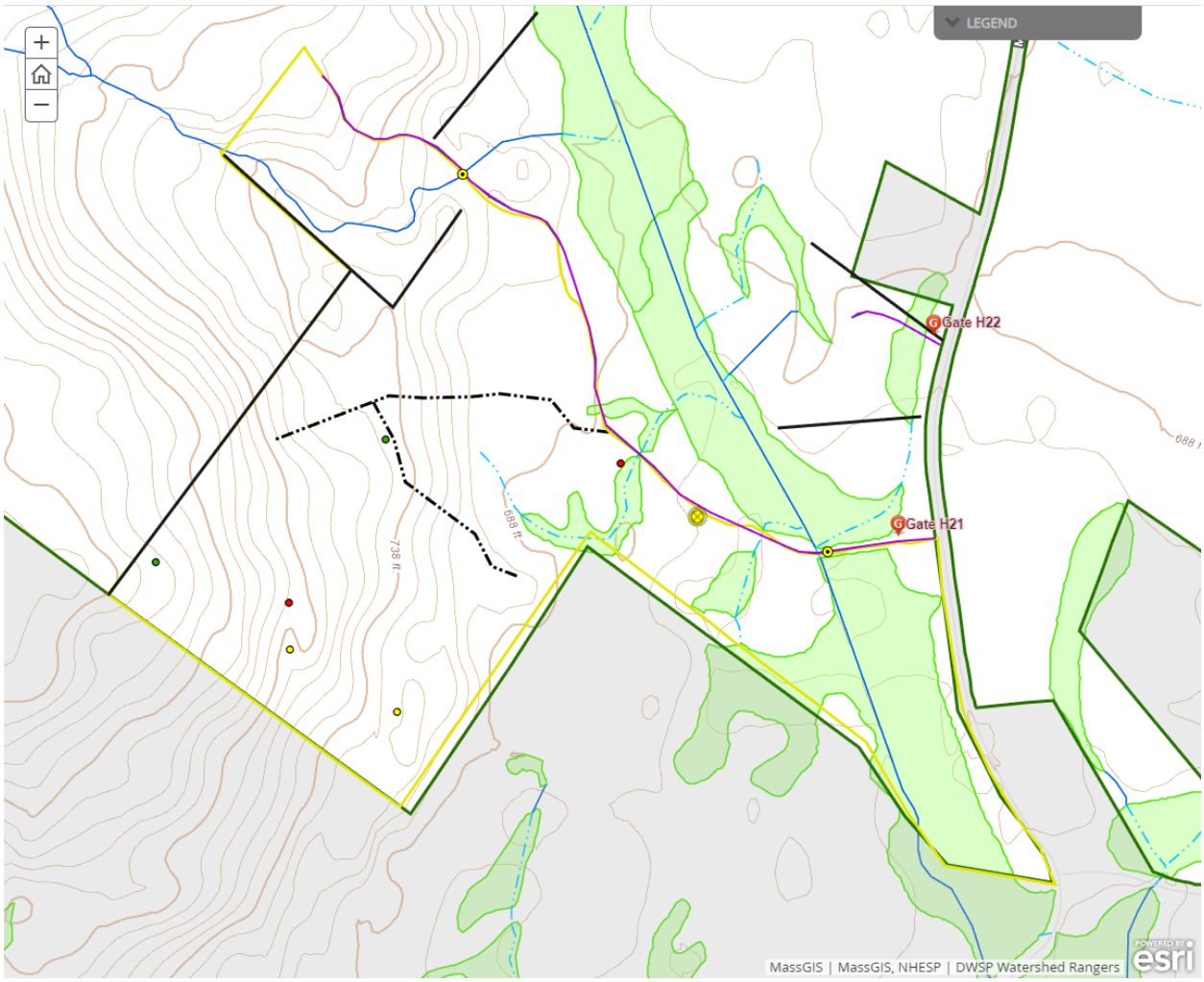
Forwarder required: **Yes**

Feller/processor required: **Yes**

Steep slopes present: **No**

Comments on harvesting limitations:

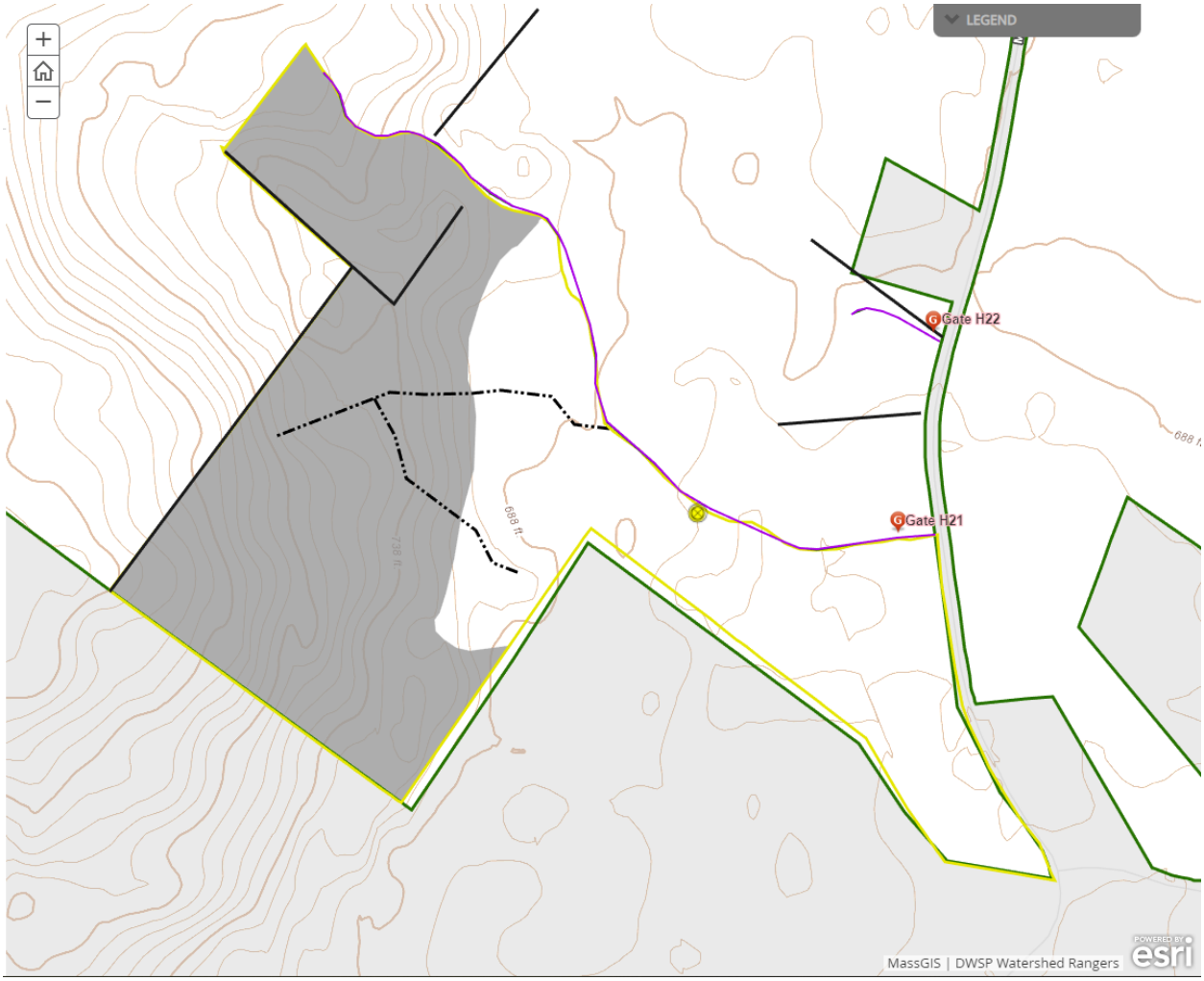
With advance regeneration present and a desire to protect as much of it as possible during the harvest, a cut-to-length harvesting system will be employed.



Cultural Resources

Comments on Cultural Resources:

No known cultural resources. Surface stone prevalent throughout.



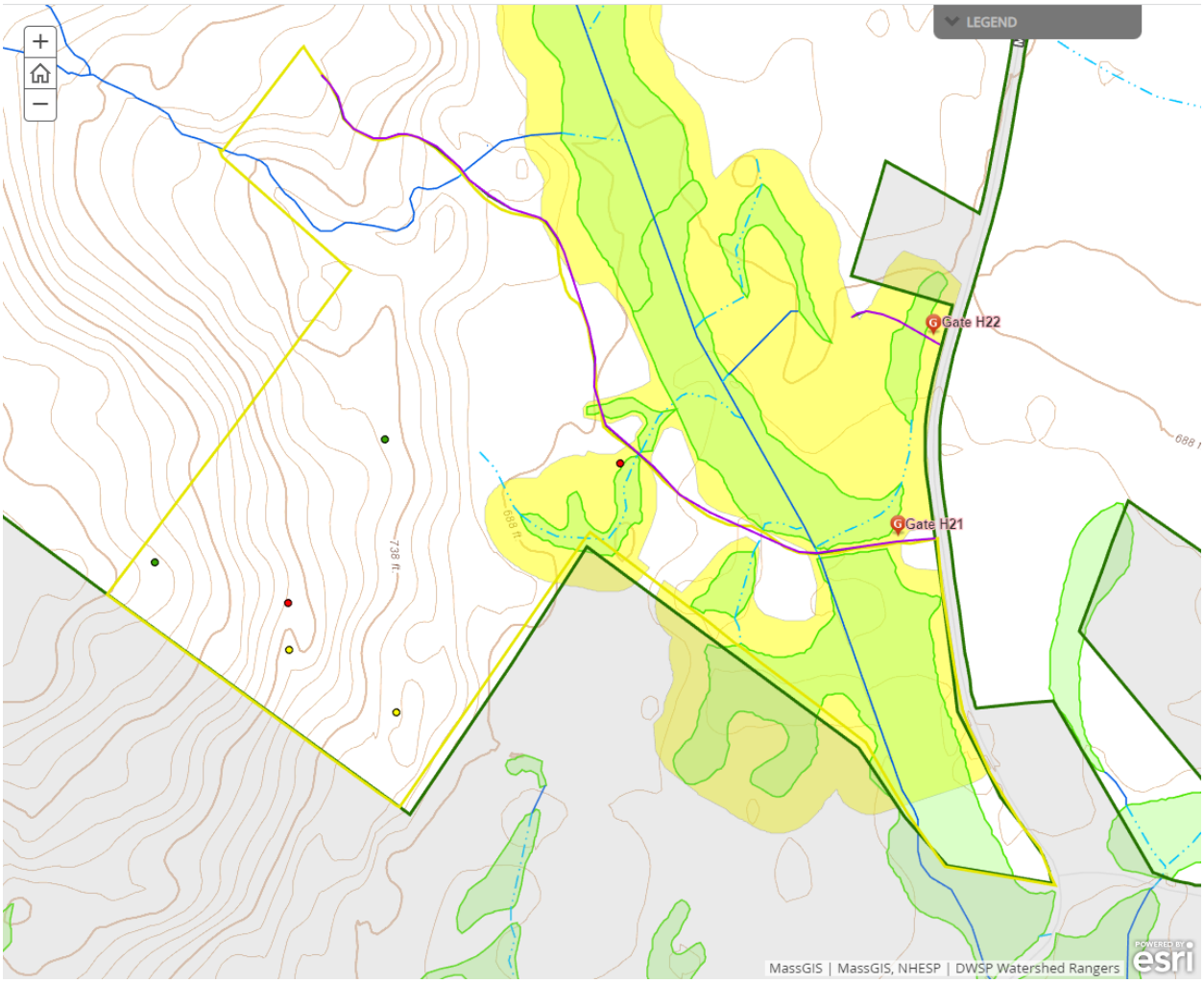
Wildlife Resources & Rare and Endangered Species

General Wildlife Comments:

This area is part of a much larger block of DWSP-owned land where two young forest habitat cuts have been performed in the past 15 years and where moose routinely frequent.

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 include in this report. DWSP will coordinate with NHESP and follow recommendations to protect these species during the proposed activity.

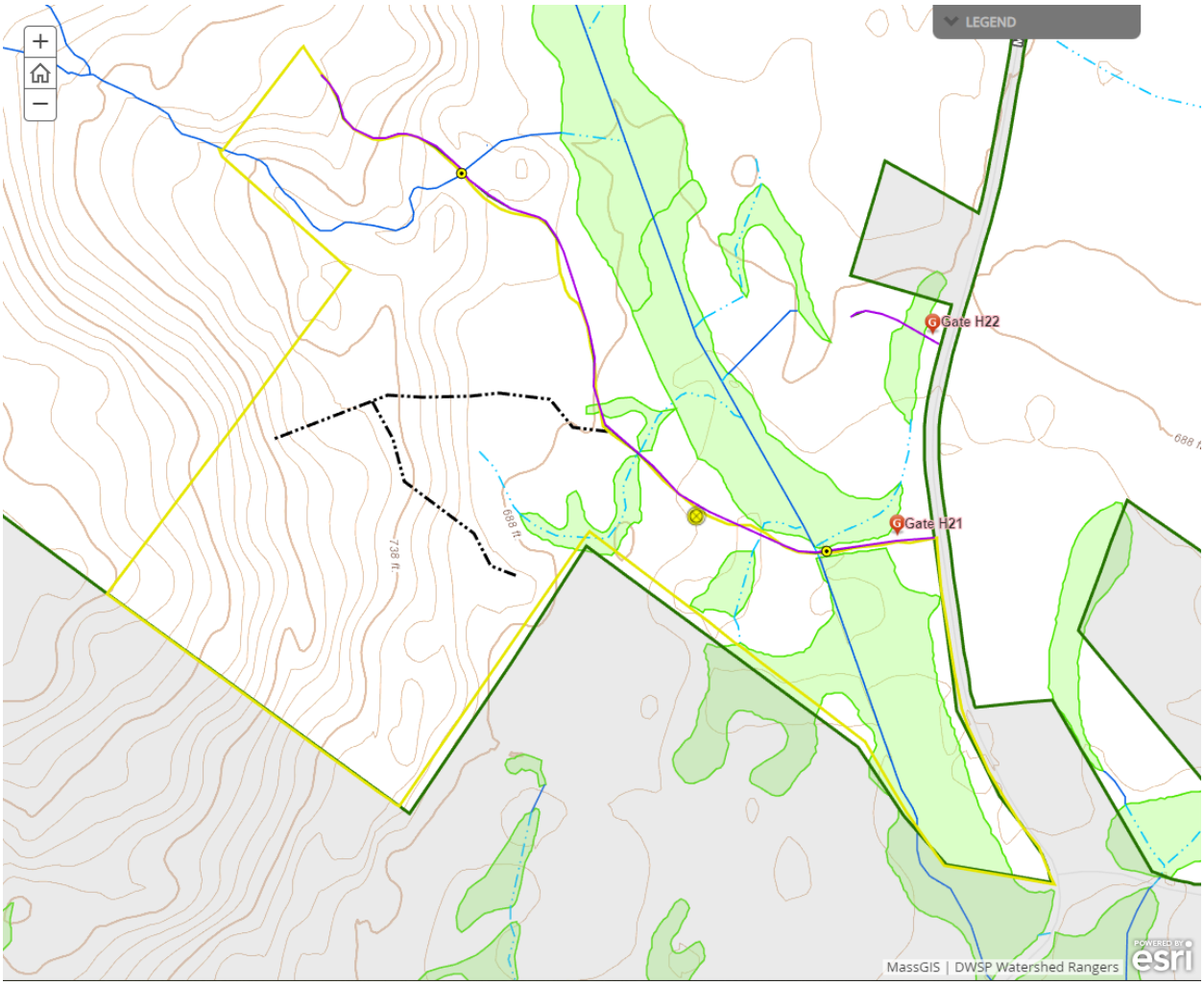


Environmental Quality Engineering

Comments on EQ Issues:

Roughly 6 acres at the north end of this area is within the subwatershed of the small stream that being used as the control subwatershed in the long-term forestry subwatershed study. Foresters will coordinate with Wachusett Environmental Quality staff regarding the timing of this operation to ensure that there's no conflict with the study. An available option is to carve out any portion of this subwatershed from the sale area.

There may be an upgrade to the culvert in the road just inside the gate on Mason Road that would occur prior to this harvest.



Forest Access Engineering

Gravel needed: Yes

Landing work needed: No

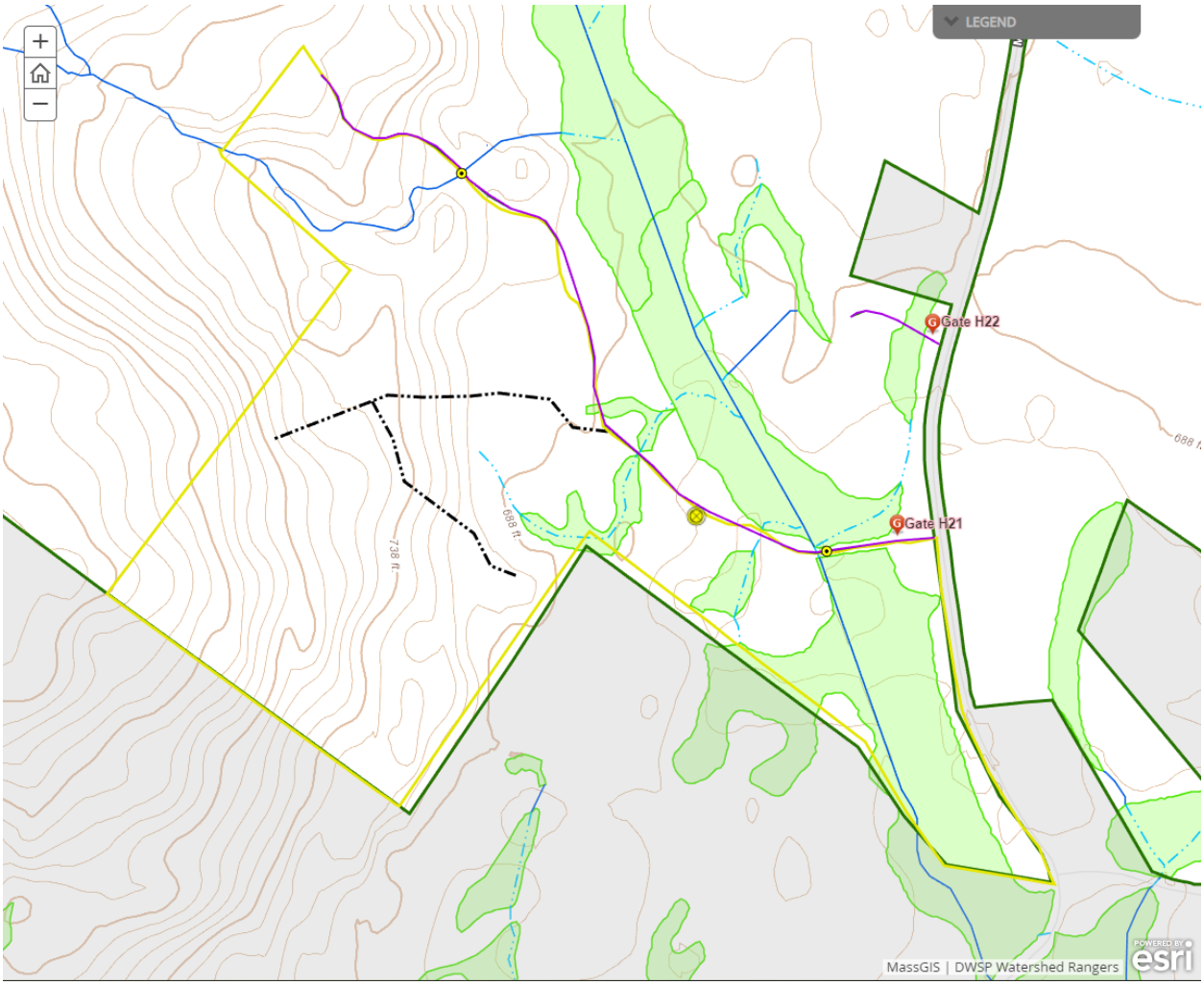
Culverts needed: Yes

Work needed on permanent bridges: No

Beaver issue: No

Further comment on access needs:

The stream crossing of the access road just inside Gate H21 is in long-need of repair.


LEGEND
Gate H22
Gate H21
738 ft
688 ft
MassGIS | DWSP Watershed Rangers
esri

DWSP FY 2022 Forestry Proposals – Master Legend for story maps