Wachusett Harvest Proposal WA-22-155

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. These former pastures have a diverse hardwood understory, a portion of which will be released thereby creating a second age class of forest in this area.

Proposal Location

Located in the town of Sterling between Redemption Rock Trail and Justice Hill Road. The entirety of this proposed sale area is bounded by stone walls except for the northwestern corner which is bound by an intermittent stream which is a tributary to the Stillwater River. The stone wall along the northern end is also a property boundary line.

Total Acres: 57

General Description

	Overstory Type(s)	Acres
Dominant	Oak - hardwoods	19
Secondary	Northern red oak	17
Other	White pine - hardwoods	13

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

Description of forest composition/condition:

This area was purchased by the MDC in 1998. It's made up of two former pastures that are surrounded by stone wall; a 26 acre pasture in the south and a 39 acres pasture formerly known as the "Jones Pasture" to the north. Only the northern 18 acres of the southern pasture are included in this proposed sale area. The old AT&T long-distance phone cable right-of-way was used to divide this area.

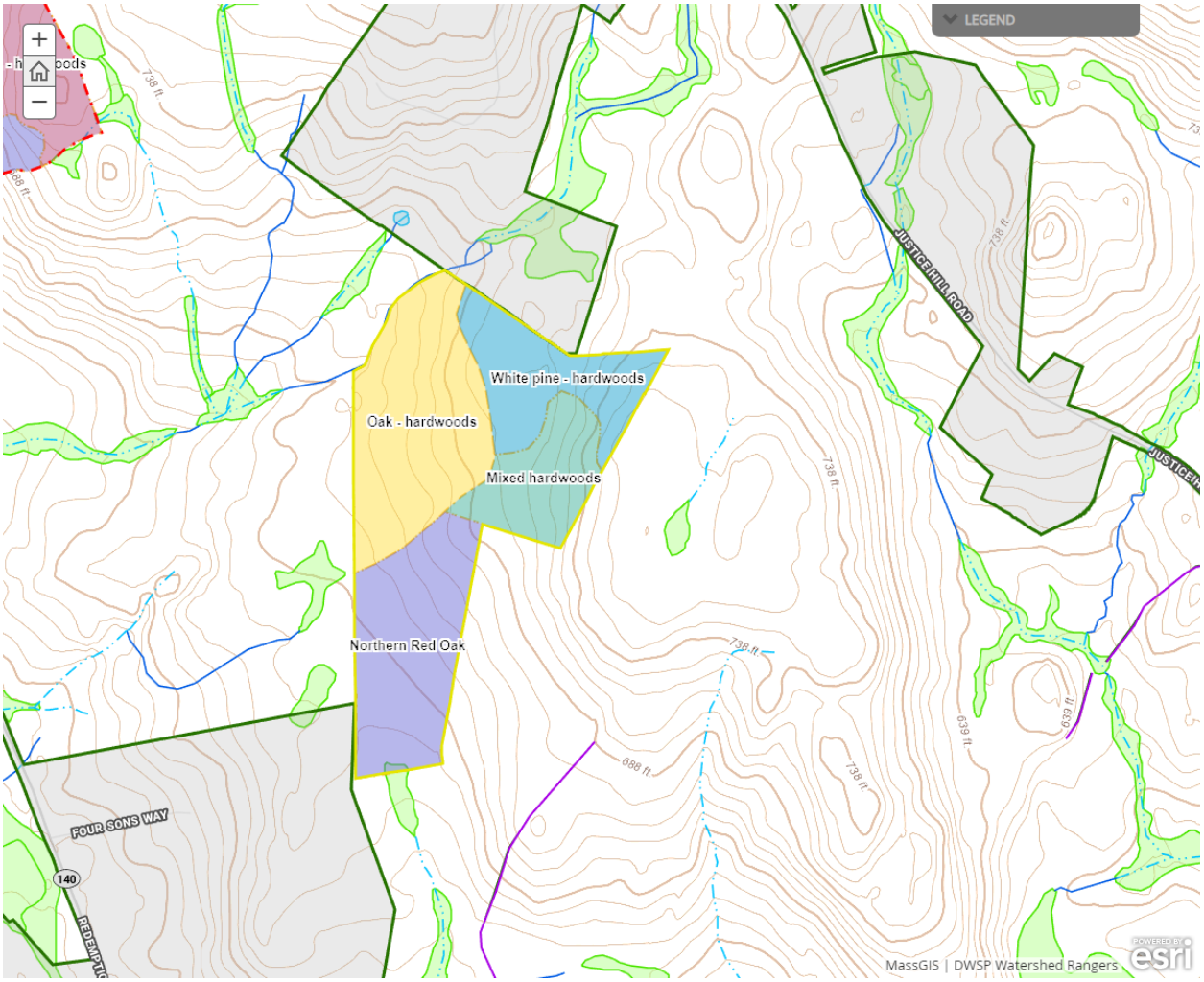
The southern pasture is dominated by red oak in the overstory along with red maple, white pine, white oak, black birch, white ash and paper birch. The understory is dominated by witchhazel along with hazelnut and scattered mountain laurel. The advance regeneration is comprised of black birch, red maple, white oak, red oak, white pine, white ash, paper birch and hickory.

The northern pasture is dominated by red oak and white pine along with hickory, black birch, red maple, white oak and white ash. Eastern hophornbeam is found in the far north end of this area. The dominant shrub in the understory is mountain laurel. Witchhazel is more common on the lower slopes to the west. Advance regeneration is comprised of black birch, red oak, white pine, red maple, white ash, hickory and black cherry.

The age structure of this area is as follows: 0%, 0-20 years old; 0%, 21-40 years old; 0%, 41-60 years; 15%, 61-80 years; 80%, 81-100 years and 5%, >100 years old. The oldest trees are in the far southwest end of the southern pasture. The red oaks here originated in about 1913 making them about 108 years old. There's an individual very large white oak in the approximate middle of the northern pasture that was present when this was still an actual pasture making it much older than the 85 year old forest that now surrounds it.

Assessment of Terrestrial Invasive Species:

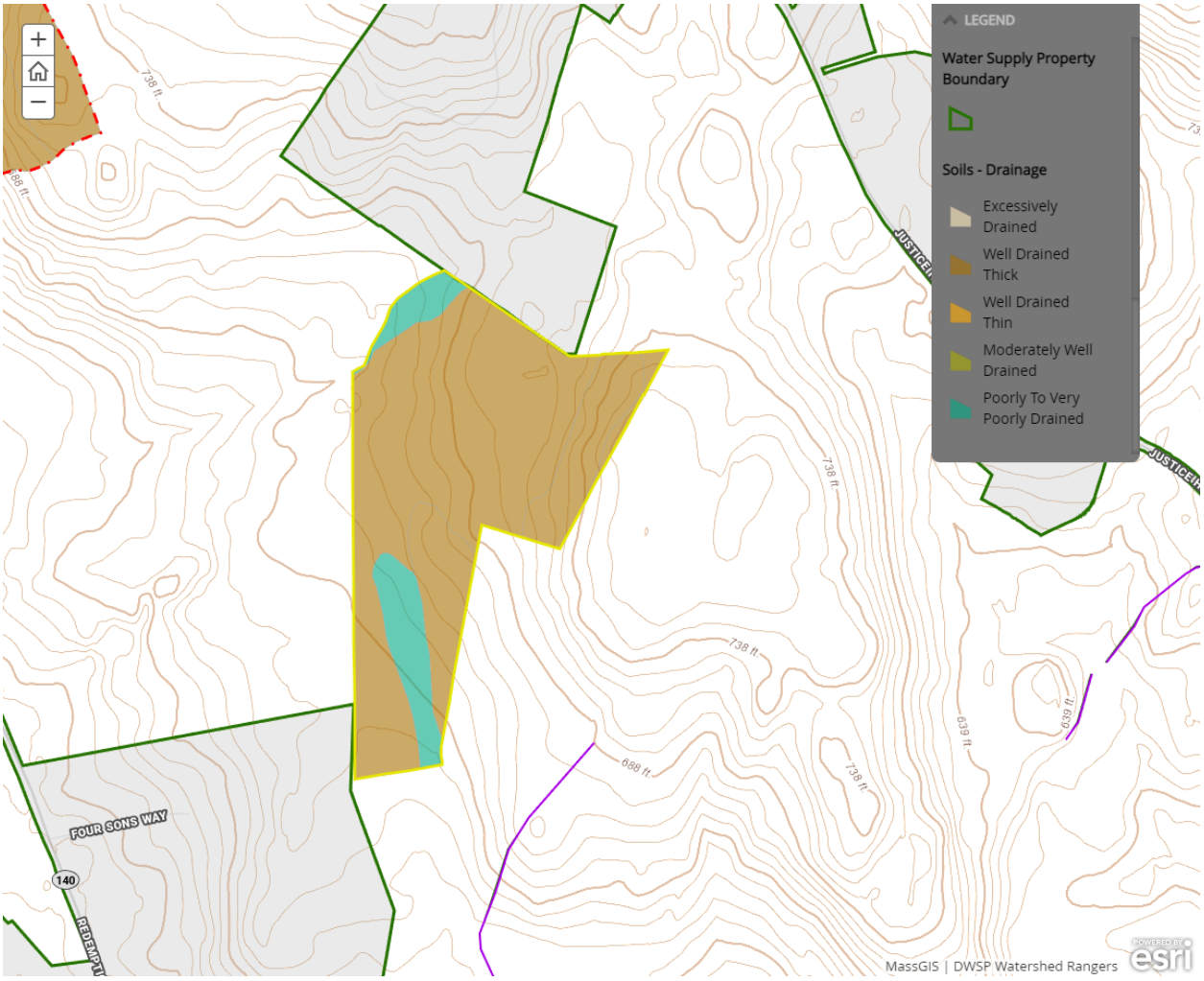
Sampling did not find any terrestrial invasives.



Soils

Drainage Class	%
Excessively Drained	0
Well Drained Thin	0
Well Drained Thick	88
Moderately Well Drained	0
Poorly to Very Poorly Drained	12

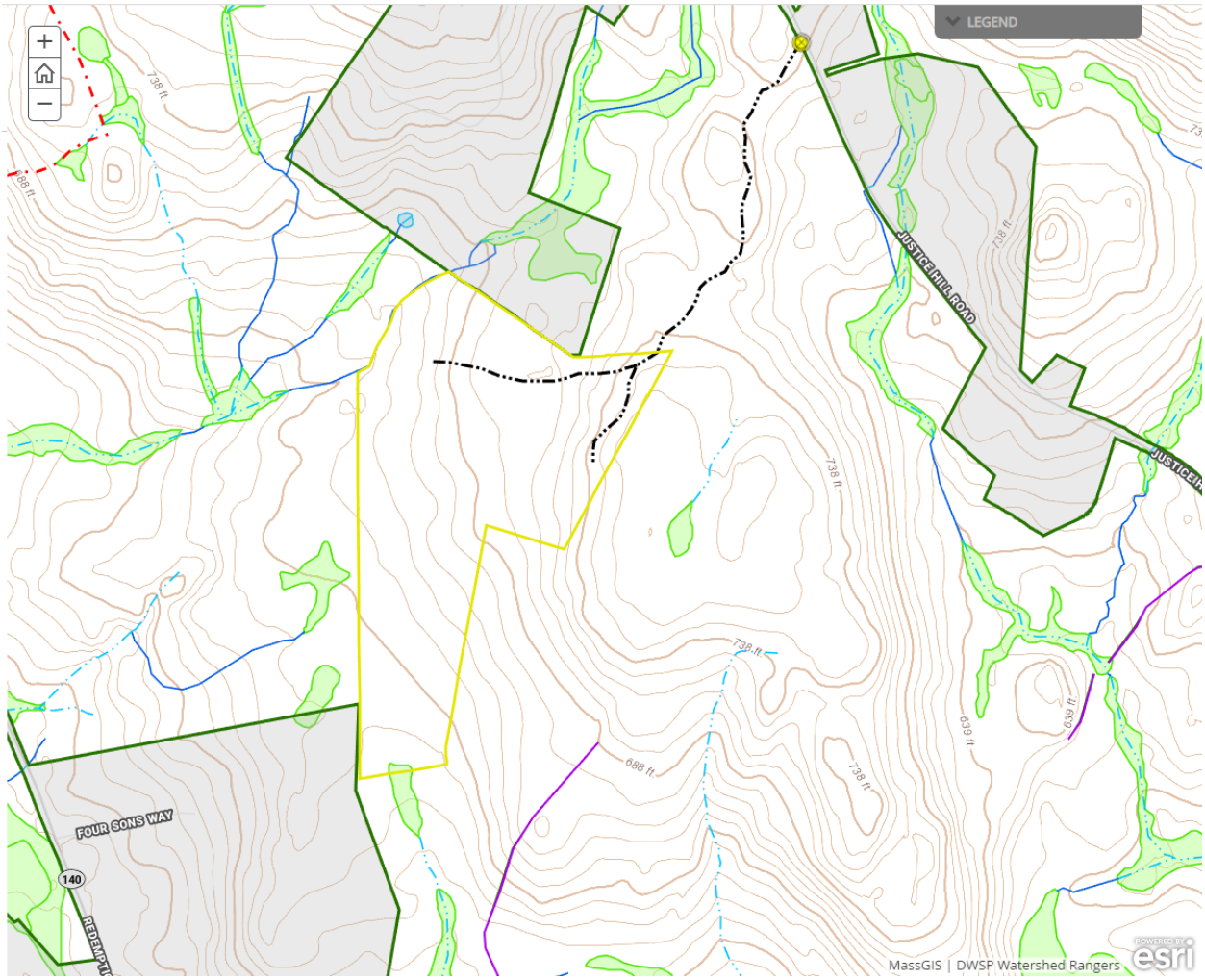
The well-drained thick soil is the Paxton fine sandy loam, extremely stony. The poorly-drained soil is the Ridgebury fine sand loam, extremely stony which is found along the stream at the north end and across a portion of the southern pasture.



Wetlands

- Wetlands present? - **Yes**
- Streams present? - **Yes**
- 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**

An intermittent stream which is tributary to the Stillwater River forms the northwestern boundary of this area. There is also a very small, unmapped intermittent stream roughly in the middle of the northern pasture which originates and ends within this area and is not tributary to a wetland or other stream.
There is a piece of a small mapped wetland in the far southern end of this area. However, upon inspection, it appears that this wetland should perhaps be mapped much farther north into the southwestern corner of this area.



Silviculture

Acres in Intermediate cuts: **0**

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

Acres in Regeneration cuts: **18**

Average regen opening size: **1**

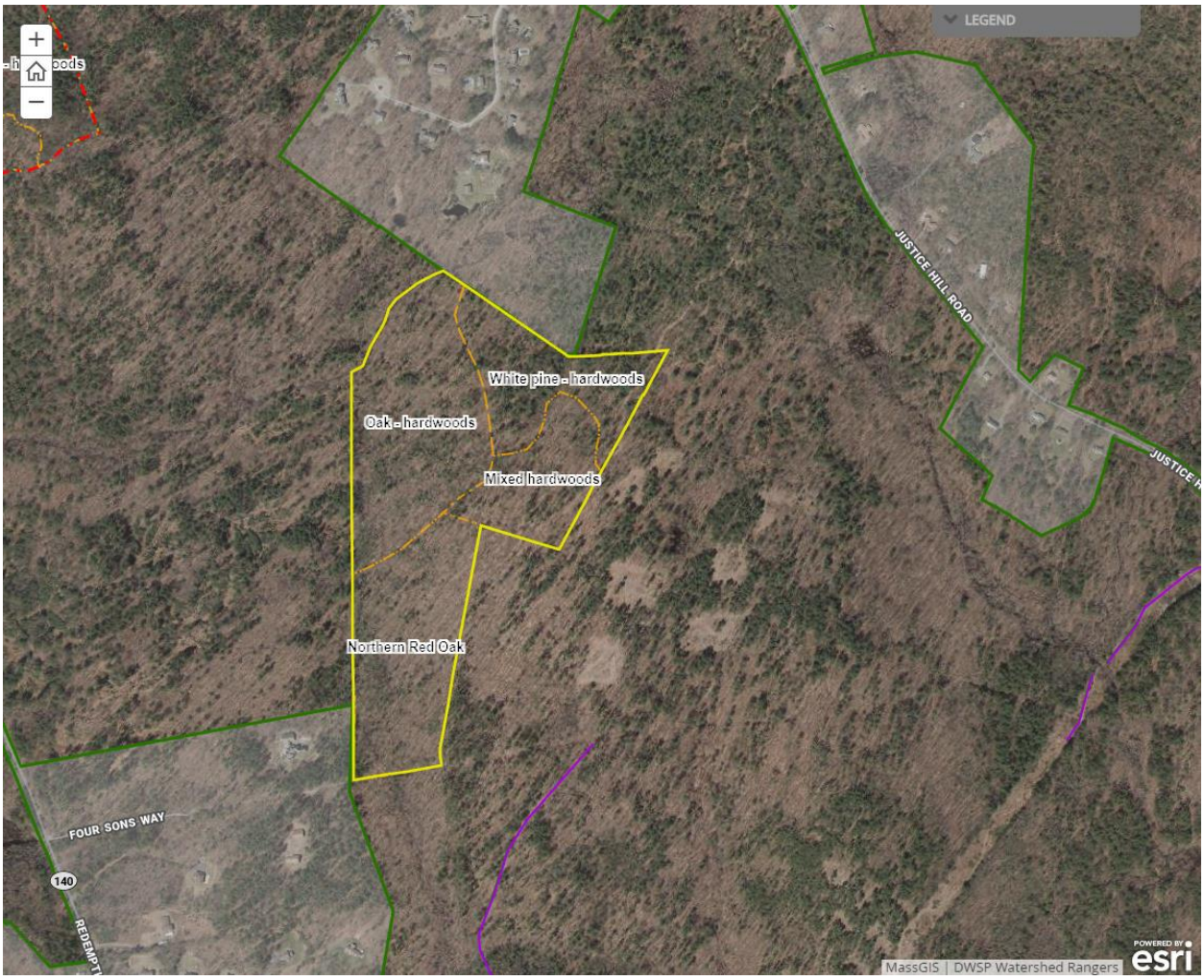
Maximum regen opening size: **2**

Description of advance regeneration in proposal area:

Sampling found adequate regeneration in 38% of the plots with marginal regeneration in an additional 32% of the plots. Most of the plots with adequate regeneration are in the northern pasture although there some in the southern pasture. Black birch is the most commonly found species in the understory although there is also a good component of red oak, white oak, black oak, red maple, white pine and hickory along with lesser numbers of eastern hornbeam, sassafras, yellow birch and black cherry.

General comments on silviculture proposed:

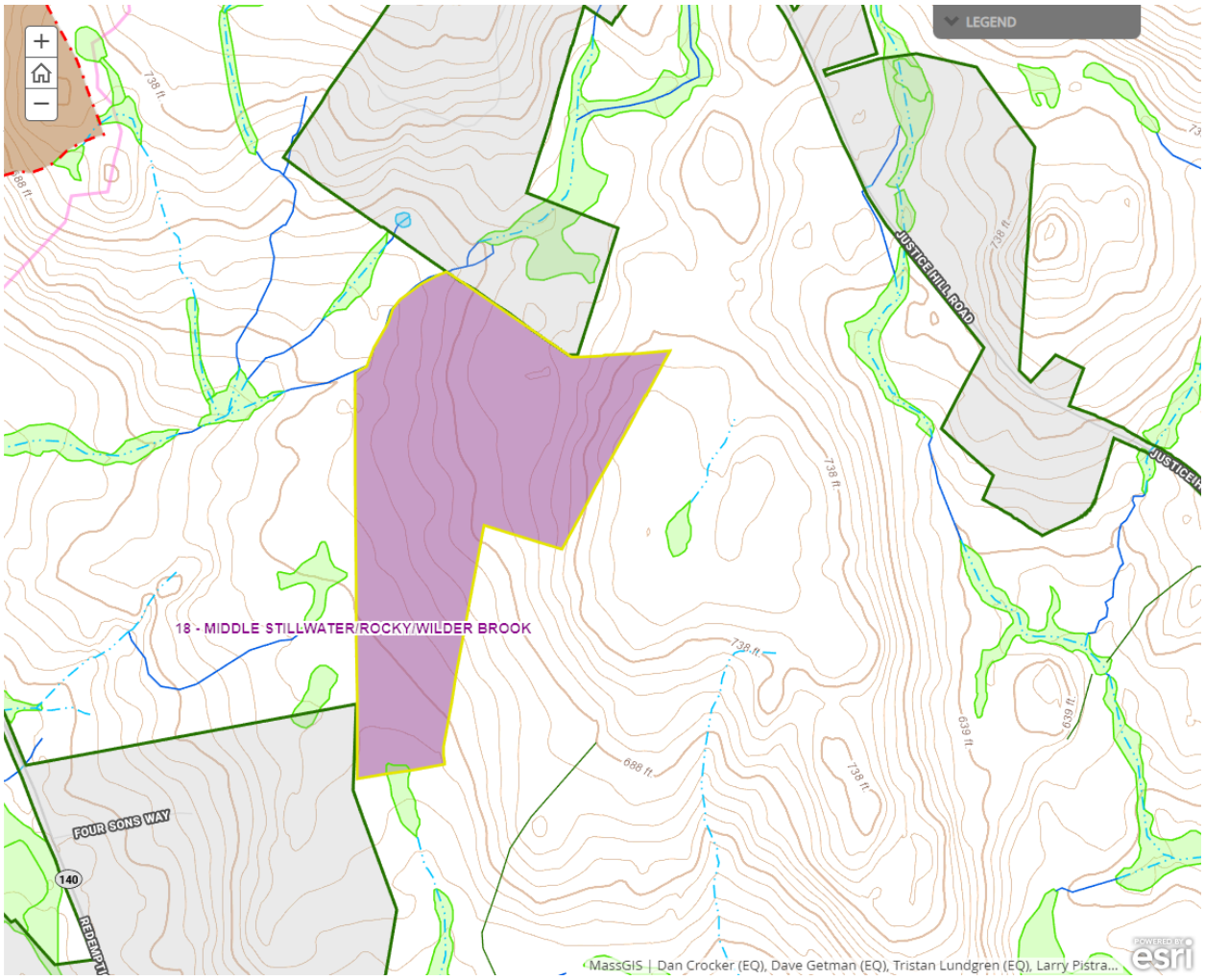
With good advance regeneration present comprised of a diversity of species well suited to this site, the goal will be to make openings that total about 18 acres. This will result in a new age cohort within the forest that makes up about 1/3rd of the area of this working unit. These openings will be well distributed throughout the area taking advantage of where the advance regeneration is best. Given that the majority of the good advance regeneration is found in the north pasture, it's likely that a disproportionate amount of the acreage of the new age cohort will here. 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; 10%, 61-80 years; 52%, 81-100 years and 5%, >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
18 (Middle Stillwater/ Rocky/ Wilder)	2028	118	1910	57

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



Harvesting Limitations

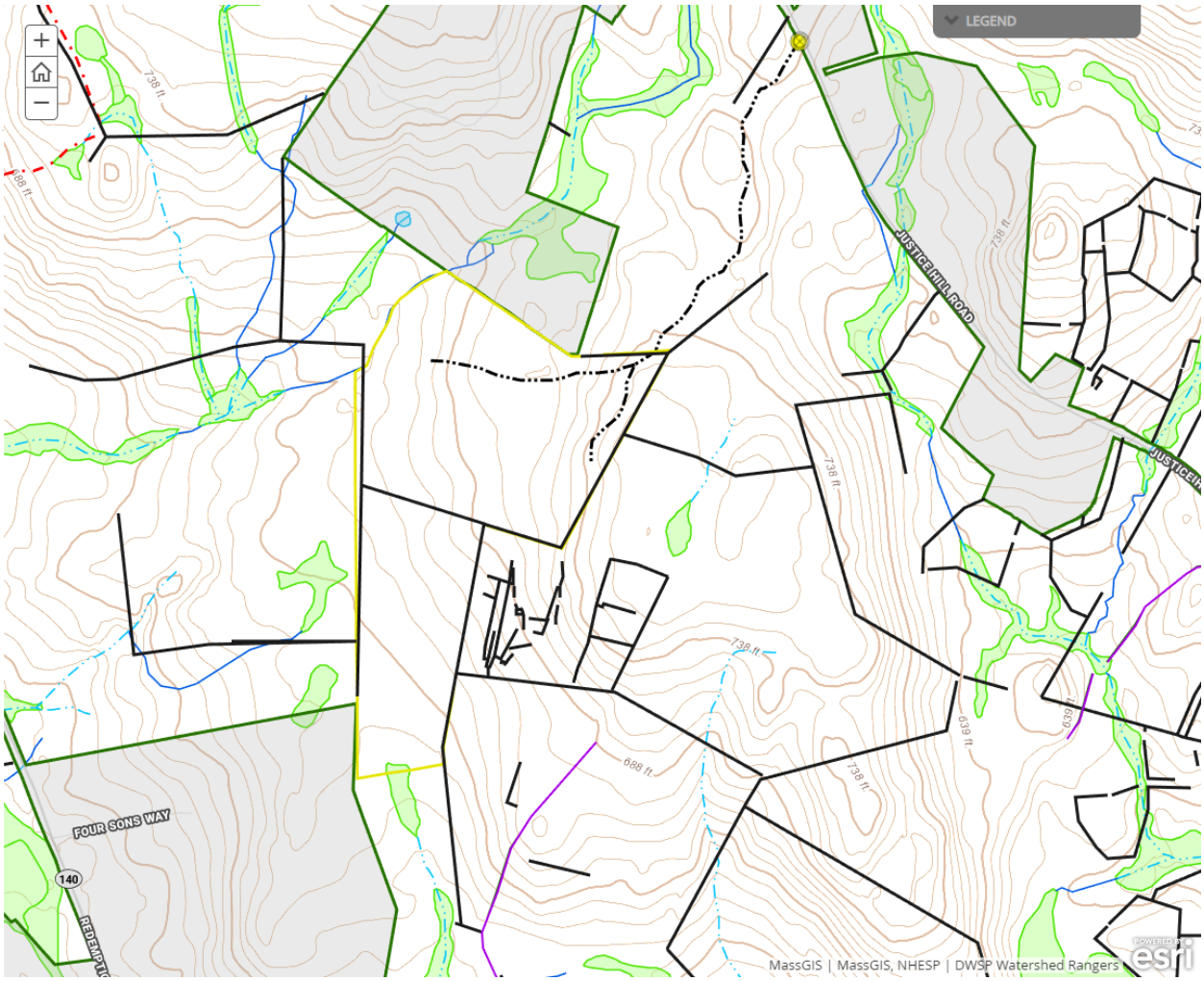
Forwarder required: **Yes**

Feller/processor required: **Yes**

Steep slopes present: **No**

Comments on harvesting limitations:

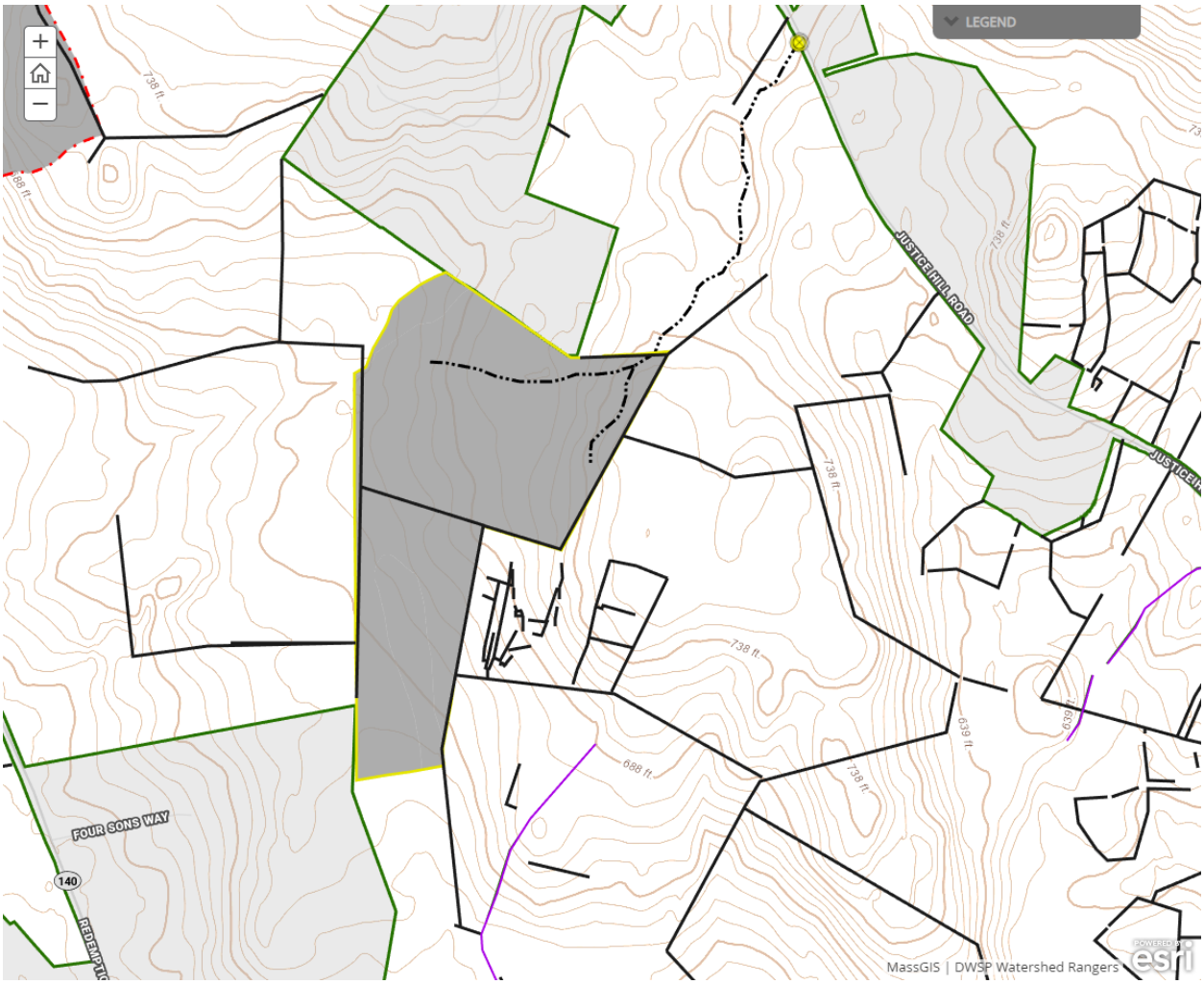
With advance regeneration present and a desire to protect as much of it as possible during the harvest, a cut-to-length harvesting system will be employed.



Cultural Resources

Comments on Cultural Resources:

Surface stone prevalent throughout.



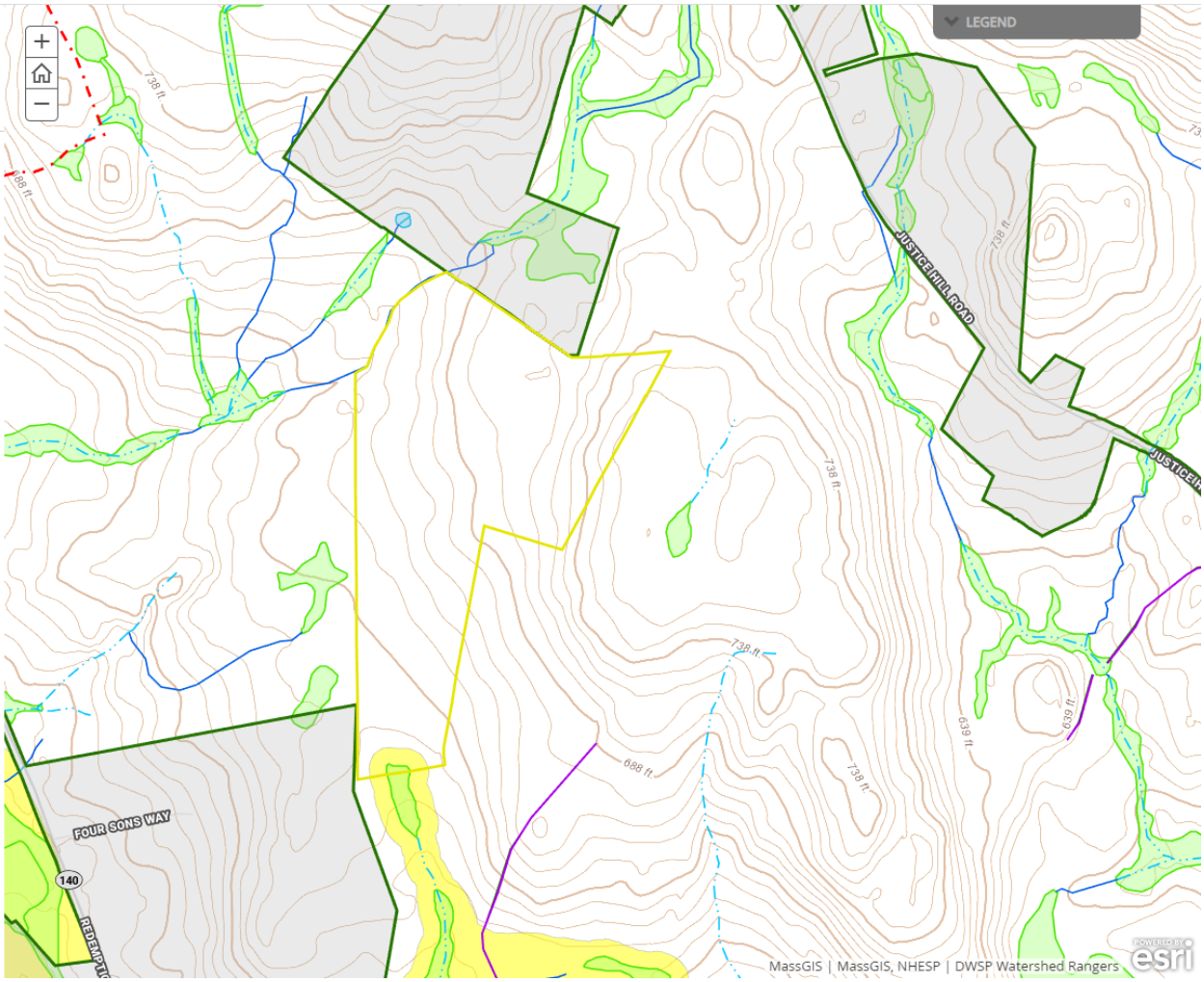
Wildlife Resources & Rare and Endangered Species

General Wildlife Comments:

Deer present but browse pressure is light.

Comments on Rare Species/Habitats:

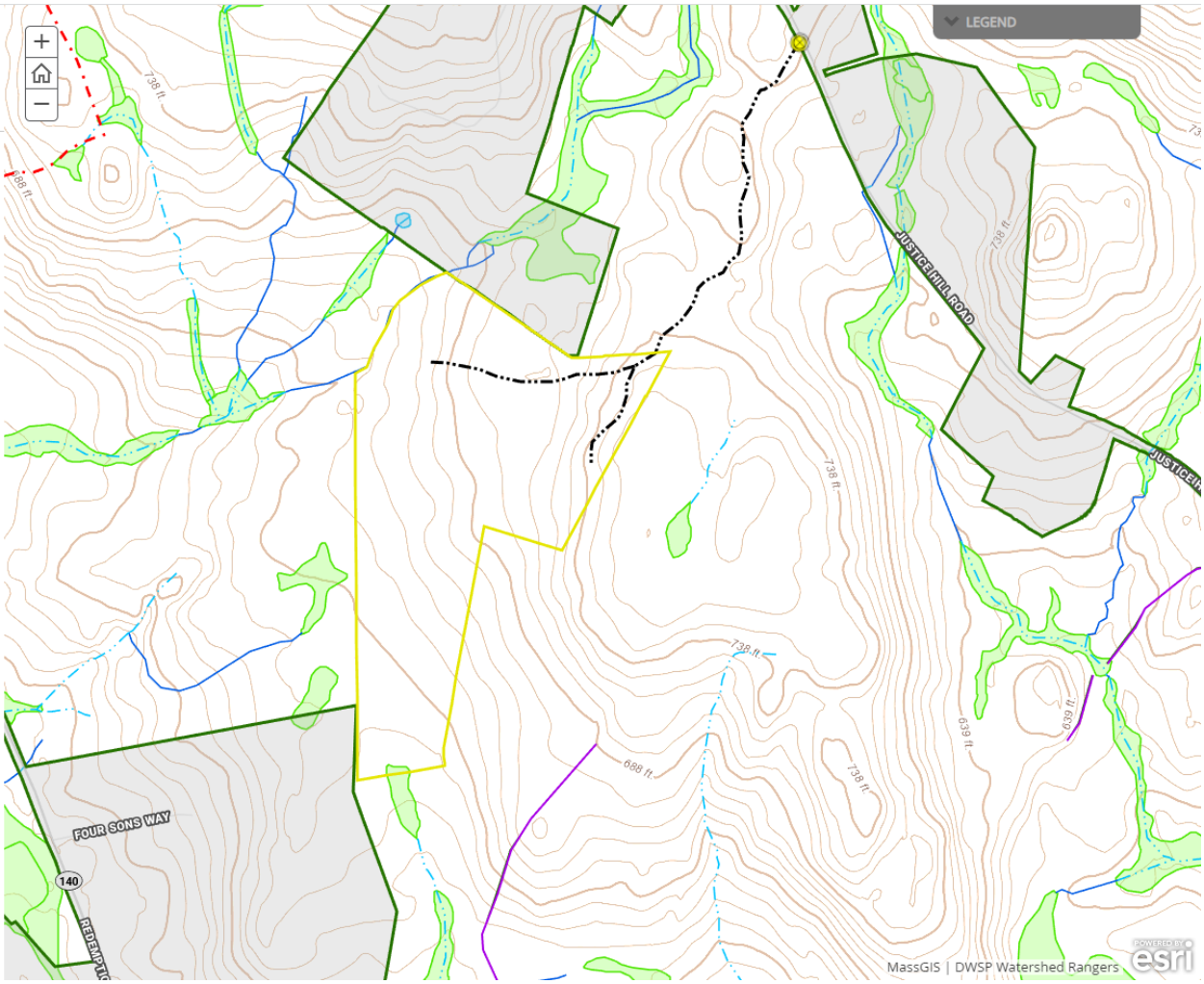
NHESP has determined that certain state-listed sensitive species or habitats may exist within the lot proposal area. To protect them from unnecessary disturbance, detailed information regarding affected species and their locations is not include in this report. DWSP will coordinate with NHESP and follow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



Environmental Quality Engineering

Comments on EQ Issues:

There are no stream crossings.



Forest Access Engineering

Gravel needed: No

Landing work needed: No

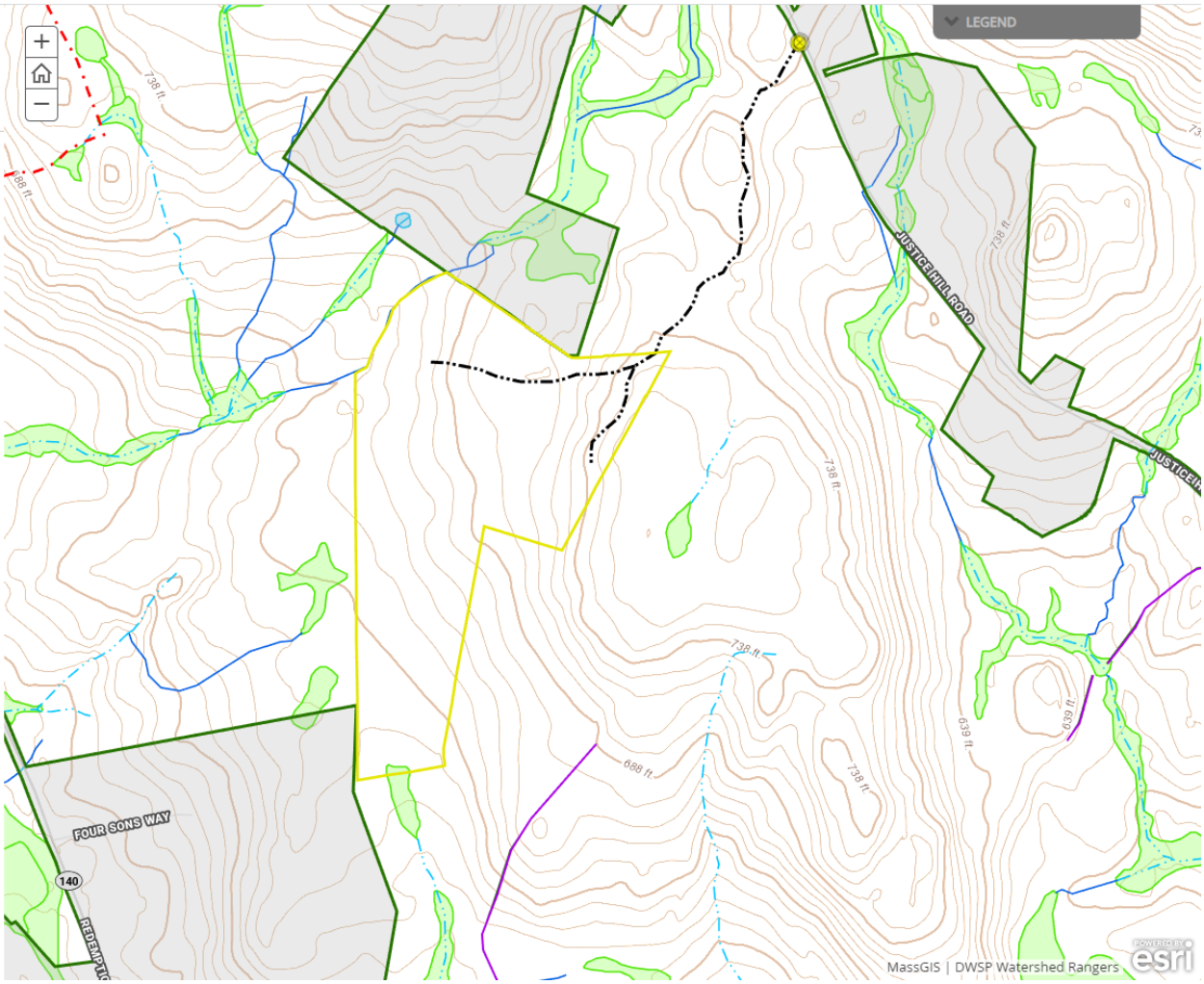
Culverts needed: No

Work needed on permanent bridges: No

Beaver issue: No

Further comment on access needs:

No issues with access.


LEGEND
738 ft
688 ft
JUSTICE MILL ROAD
738 ft
738 ft
738 ft
639 ft
639 ft
738 ft
688 ft
FOUR SONS WAY
140
MassGIS | DWSP Watershed Rangers
esri

DWSP FY 2022 Forestry Proposals – Master Legend for story maps