Wachusett Harvest Proposal WA-20-53

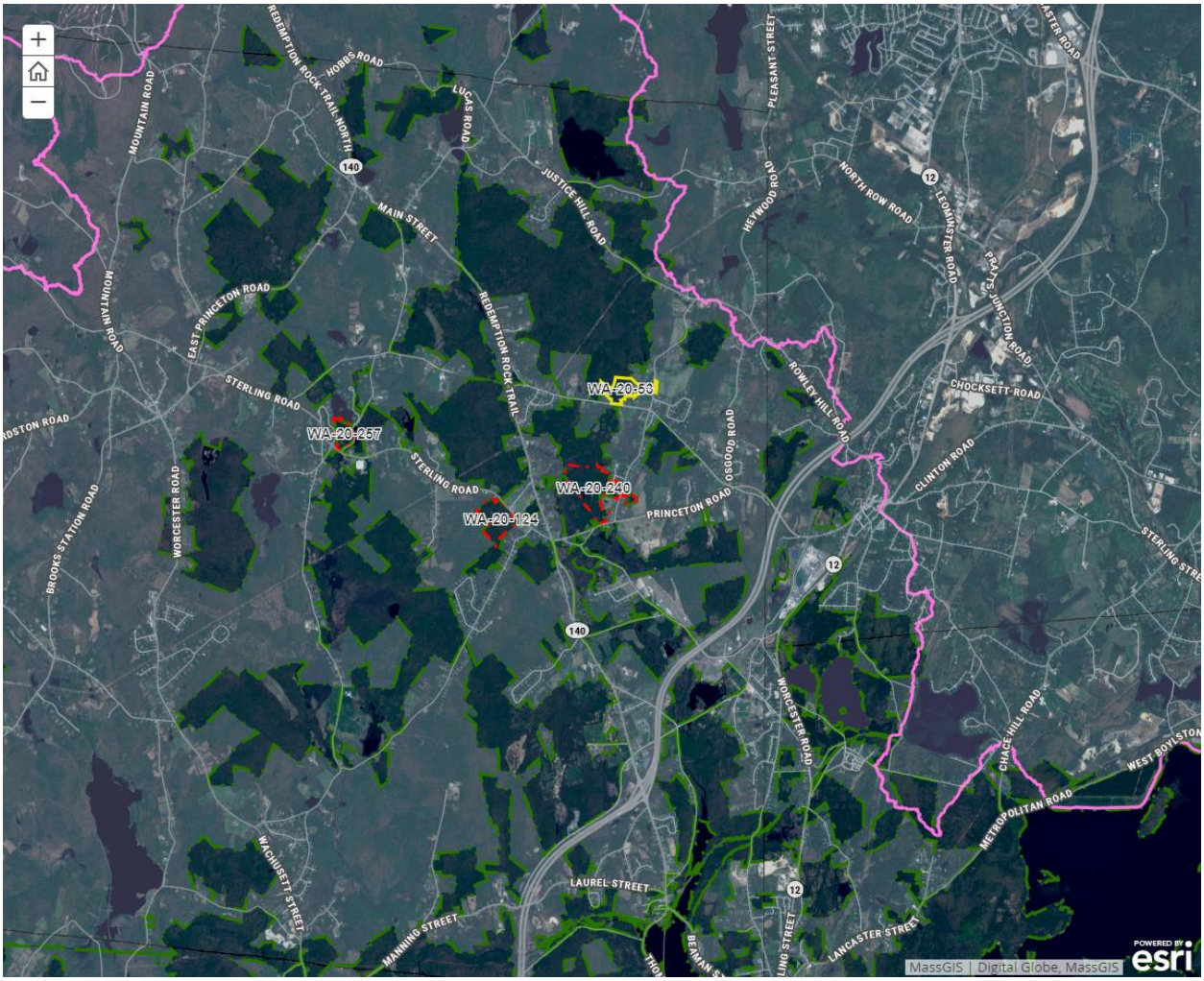
Proposal Goals

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

Starting at Beaman road then following Rocky Brook upstream northeasterly into and along a wetland, thence westerly along a stonewall for 2,700'. Then south along a blazed line for 100' then east for 150' to a stone wall. Follow the stonewall easterly to the point of beginning.

Total Acres: 31



General Description

	Overstory Type(s)	Acres
Dominant	White pine	11
Secondary	Mixed hardwoods	8
Secondary	White pine/hardwood	4

	Understory Type(s)

Dominant	Tree seedlings/saplings dominate site

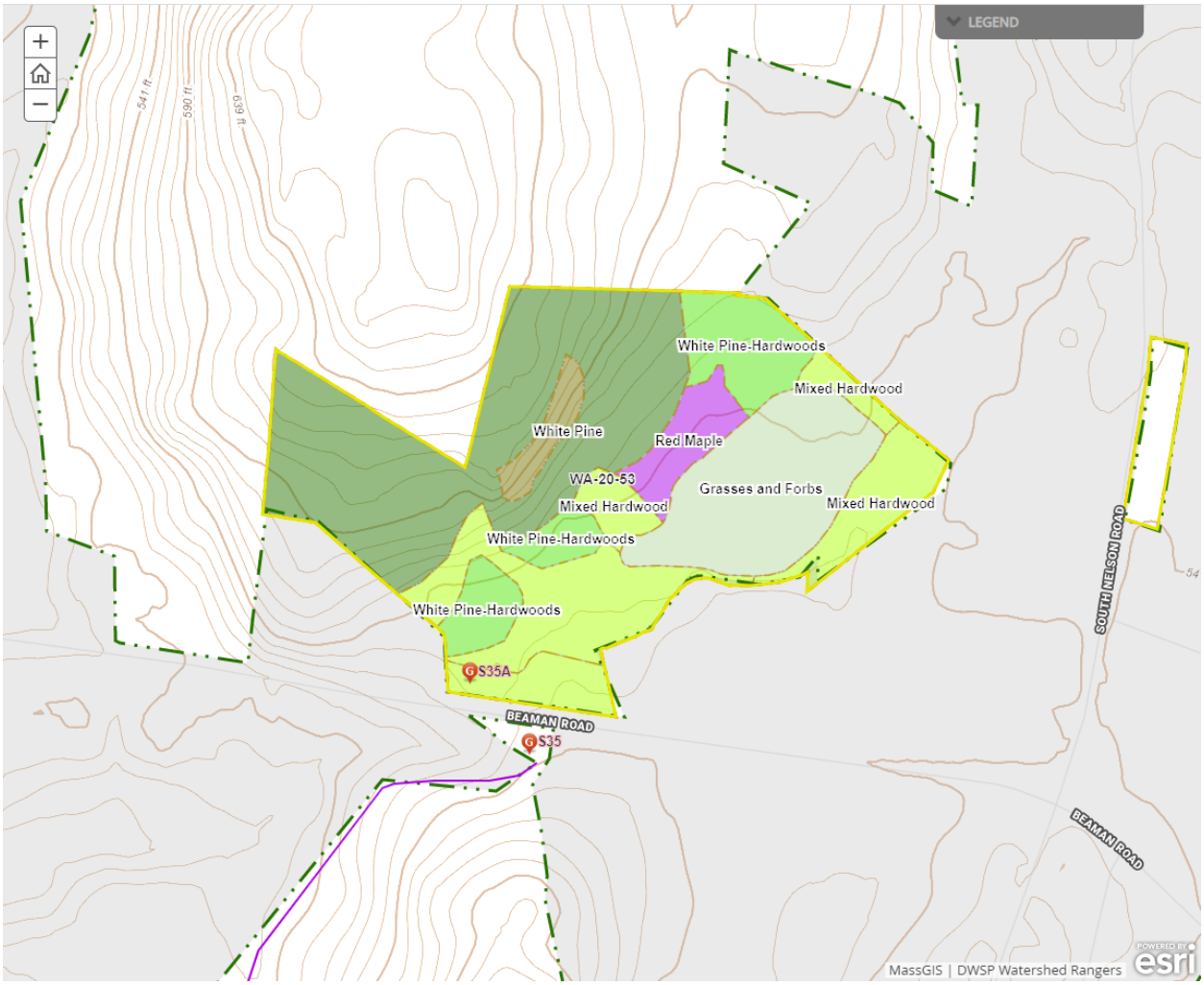
Description of forest composition/condition:

This forest is distinguishable by it's bouldered slope and diverse regeneration. This parcel was purchased in 1998 and has had no forestry work done since it was acquired. Although recent harvesting has taken place directly abutting this lot and the recent disturbances suggest hardwoods will come in thick and diverse on this lot. In the southern portion, Rocky Brook appears to have been damned previously on this lot and then the dam was taken down at some point. Beaver activity is current with a large beaver dam next to the field and now the beaver have flooded a small section of timber in the southern portion of the lot. The field is well maintained and has five crab apple trees in it; it was recently restored from a heavy infestation of invasive autumn olive.

The primary species in the overstory is white pine with smaller amounts of red oak, black oak, white oak, pignut hickory, shagbark hickory, sugar maple, bigtooth aspen, trembling aspen, yellow birch, willow, red maple, hemlock, eastern hophornbeam, striped maple, Norway spruce and basswood. The white pine ranges from good to poor vigor. White oak regeneration is strong with some red oak and white pine along a set of tiered hills and at the top . The lower and flatter sections are much more diverse in regeneration with black cherry, sugar maple, hickory, white pine and red oak. Shrubs are mostly winterberry and dogwood by the brook, highbush blueberry and hawthorn at the bottom of the slope, and mountain laurel, sheep laurel and mapleleaf viburnum throughout the rest of the lot. Mapleleaf viburnum (a deer density indicator) is numerous and of good height, suggesting minimal deer pressure.
The age structure of the working unit is as follows: 5% (0-20 years old), 1% (21-40 years old), 35% (41-60 years old), 0% (61-80 years old), 59% (81-100 years old), 0% (>100 years old).

Assessment of Terrestrial Invasive Species:

During reconnaissance the following invasive species were seen within close proximity to the brook and wetland: Autumn olive, oriental bittersweet, bush honeysuckle, multiflora rose, buckthorn, winged euonymous and Japanese barberry. The invasives appear tied to the wetter soils where harvesting will not take place.

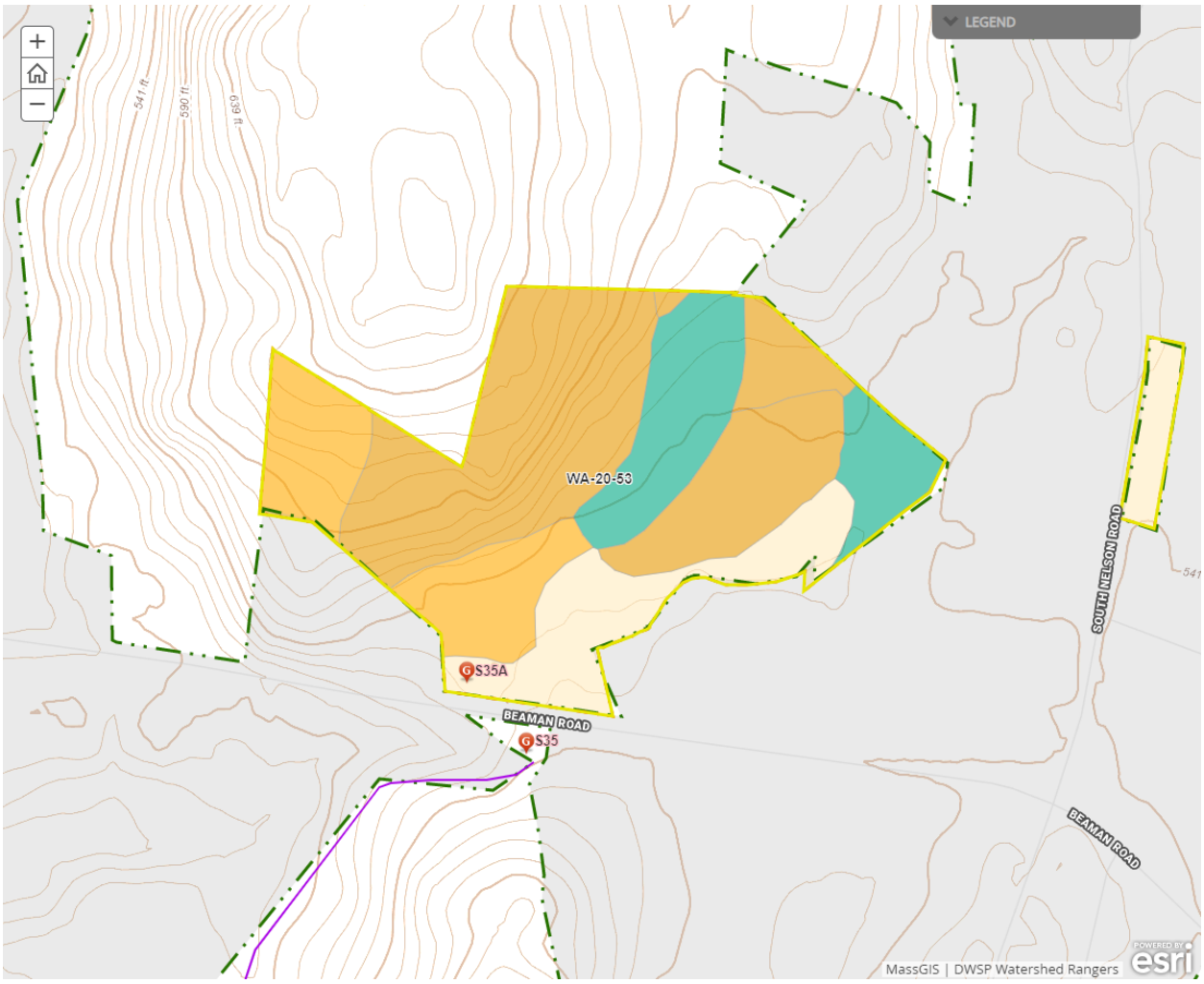


Soils

Drainage Class	%
Excessively Drained	19
Well Drained Thin	17
Well Drained Thick	47

Moderately Well Drained	0
Poorly to Very Poorly Drained	18

Excessively drained Hinckley and Merrimac make up 19%, Chatfield-Hollis_Rock outcrop on about 17%, about half the working unit is well-drained thick Canton soils, and the remaining 18% is poorly to very poorly drained Whitman and Walpole.

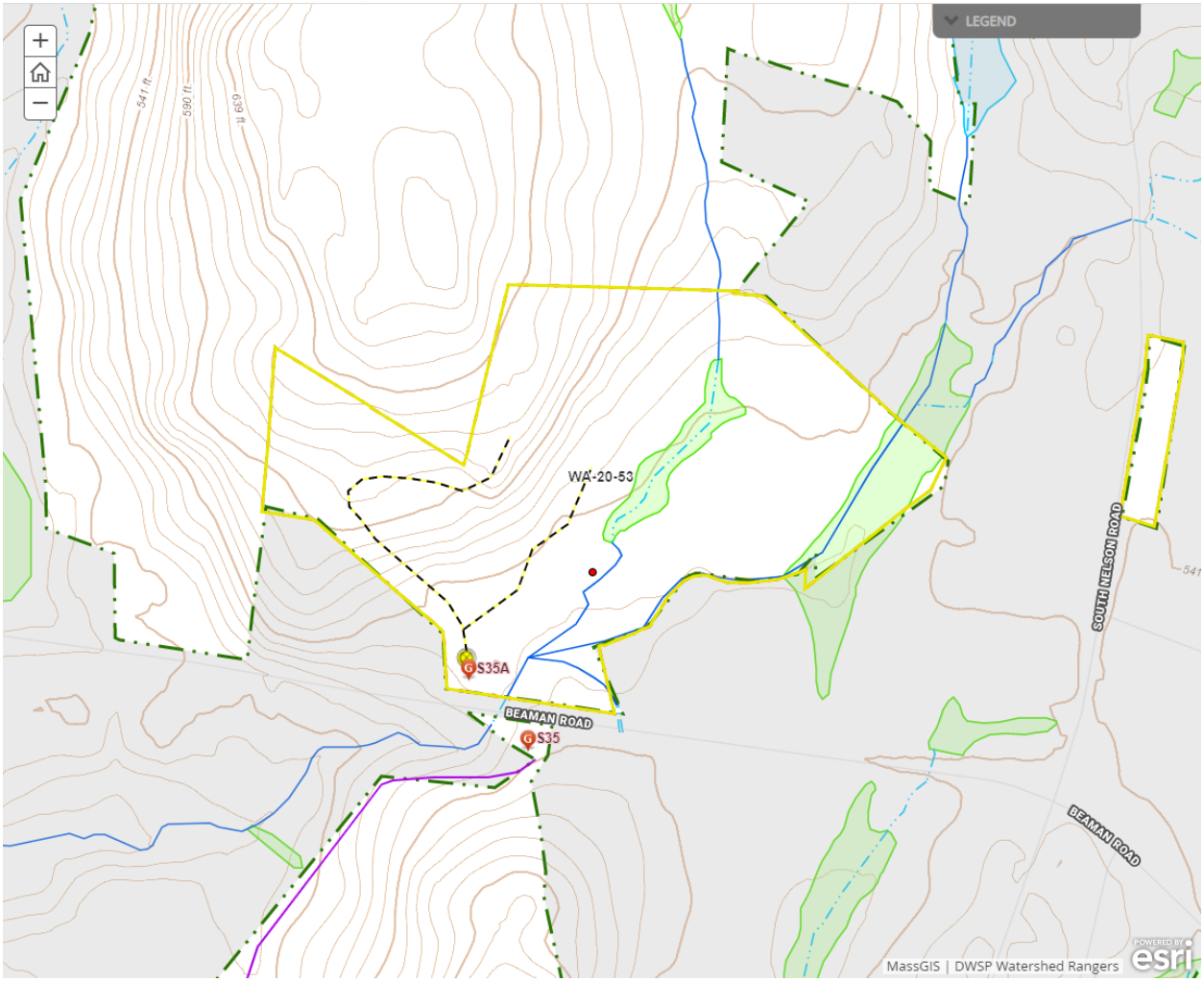


Wetlands

- 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**
- Is logging in wetlands planned? - **No**

With such a small portion on the east side of the working unit in manageable forest the focus will be on the western half of the working unit which will help avoid stream crossings. There is a vernal pool just north of the pond area above the dam on the east side of the intermittent stream (west of Rocky brook).



Silviculture

Acres in Intermediate cuts: **0**

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

Acres in Regeneration cuts: **10**

Average regen opening size: **1**

Maximum regen opening size: **2**

Description of advance regeneration in proposal area:

Regeneration sampling shows 68% of the plots regenerated or with marginal regeneration. While 27% had no regeneration, oak was present on 63% of the manageable plots. For more information, see the regeneration discussion in forest composition/condition section.

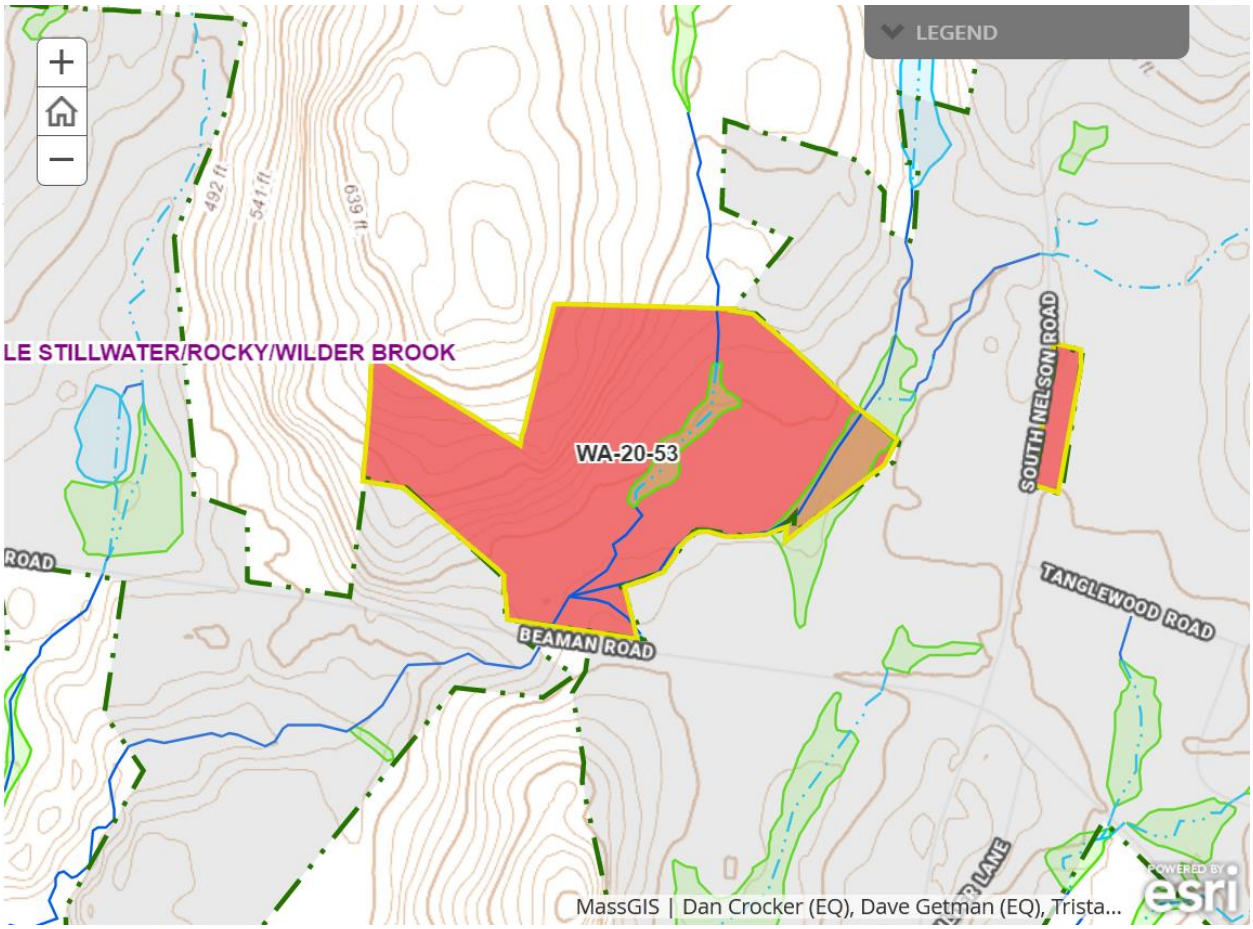
General comments on silviculture proposed:

Given the excellent understory of diverse regeneration, it should not be difficult to place appropriate openings throughout the manageable areas. These openings will remove the overstory in patches that average about one acre with a maximum size of about 2 acres and totaling about 10 acres. The species composition of this new cohort will be much more diverse than the current overstory since the lot is currently white pine and/or hardwoods with a great variety of hardwoods regenerating underneath. The challenge on this site will be tailoring openings to the topography, which may impact the number, shape and or size of the openings.

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 Brook	2189	99	448	31

The proposed acreage of regeneration cuts falls below the 25% threshold.



Harvesting Limitations

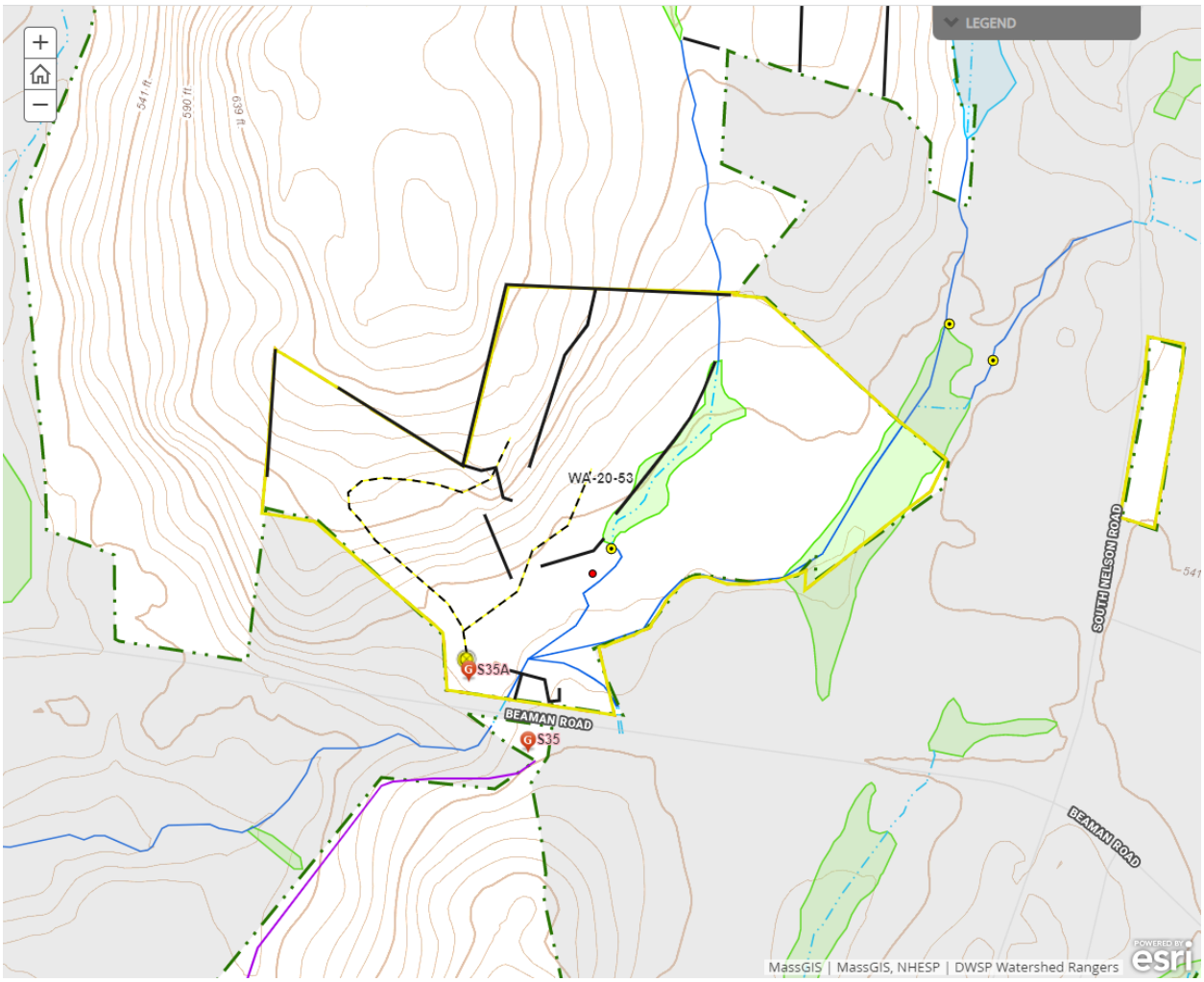
Forwarder required: **Yes**

Feller/processor required: **Yes**

Steep slopes present: **No**

Comments on harvesting limitations:

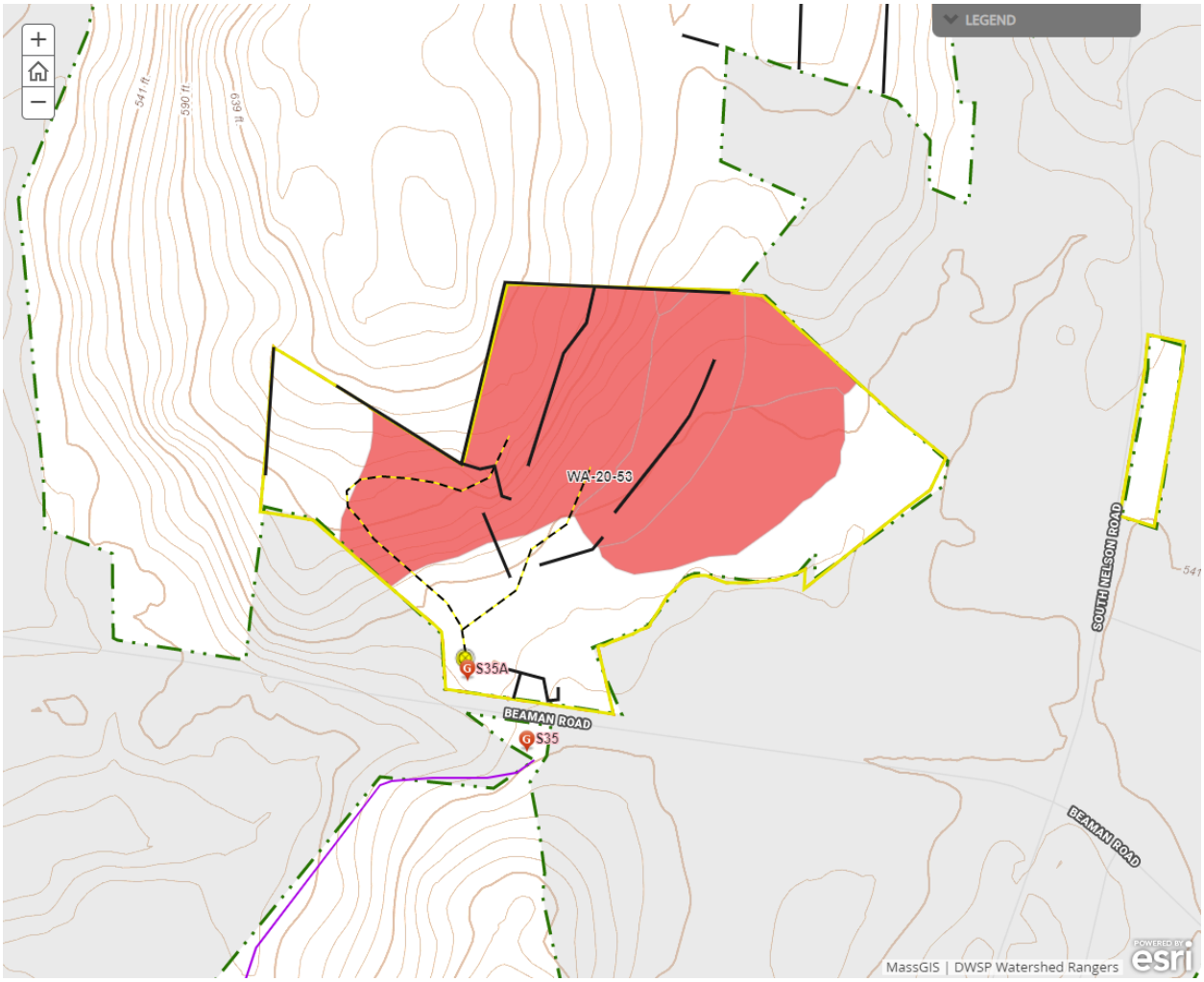
With advance regeneration present and a desire to protect as much of it as possible during the harvest, a cut-to-length harvesting system will be employed.



Cultural Resources

Comments on Cultural Resources:

No known or significant historic or archaeological resources in the proposal site. Stone walls will be flagged and avoided as much as possible. Existing barways will be used where feasible and harvest layout will protect walls as much as possible. If applicable DWSP will follow any additional recommendations from DCR's Archeologist regarding protection of sensitive sites.



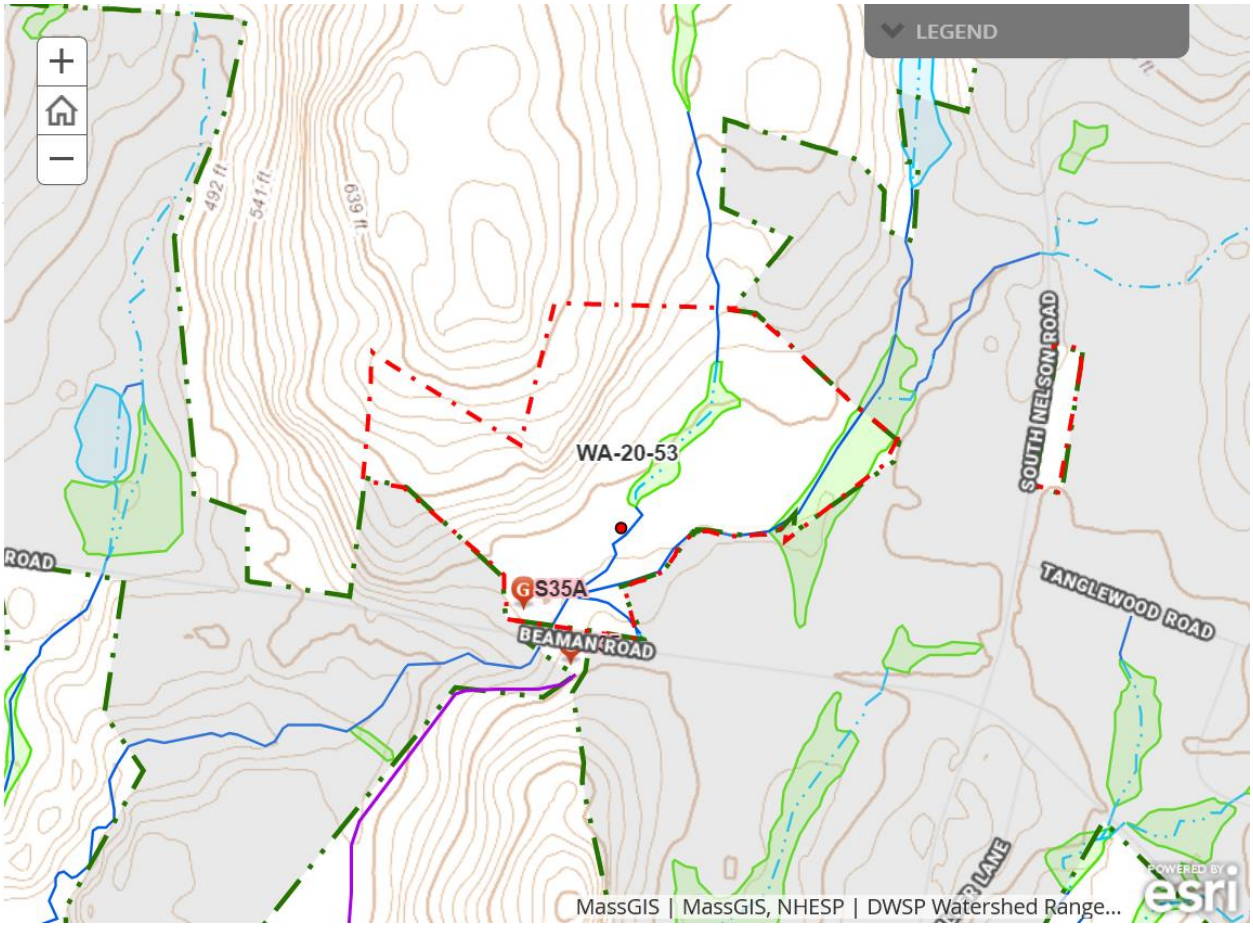
Wildlife Resources & Rare and Endangered Species

General Wildlife Comments:

Beaver have flooded a small section of woods on the east side of the working unit. The bouldered slope has been used by turkey vultures for nesting. This operation may provide an opportunity to remove a band of trees and connect nearly adjacent field habitats on two formerly separately owned parcels that are now owned by DWSP.

Comments on Rare Species/Habitats:

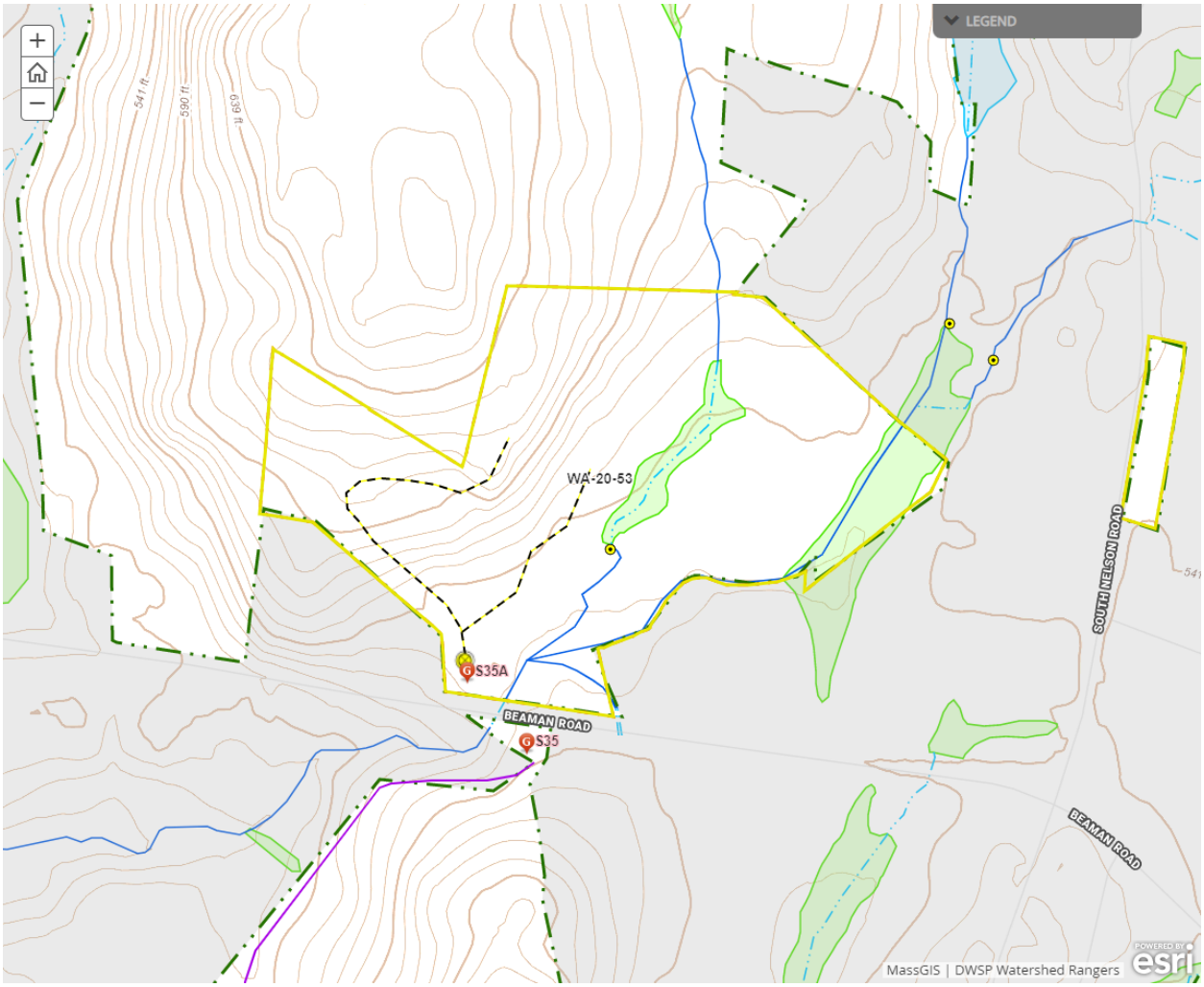
No NHESP mapped priority habitats. There is one verified vernal pool east of the road that accesses the field.



Environmental Quality Engineering

Comments on EQ Issues:

No stream crossings.



Forest Access Engineering

Gravel needed: No

Landing work needed: Yes

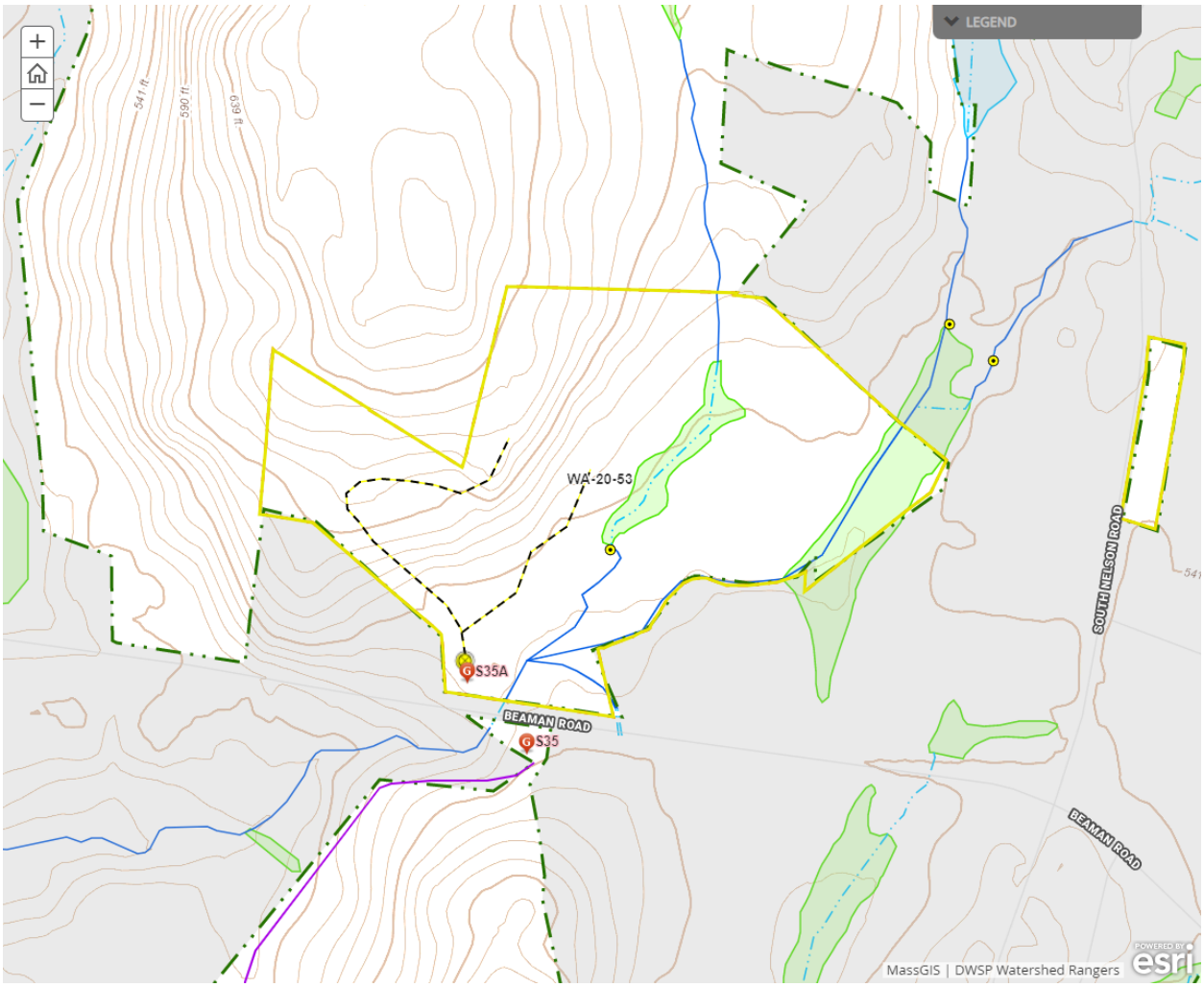
Culverts needed: No

Work needed on permanent bridges: No

Beaver issue: No

Further comment on access needs:

Access into gate S35A might need some widening for trailers.



DWSP FY 2020 Forestry Proposals – Master Legend for story maps