

# **Wachusett Harvest Proposal WA-22-245**

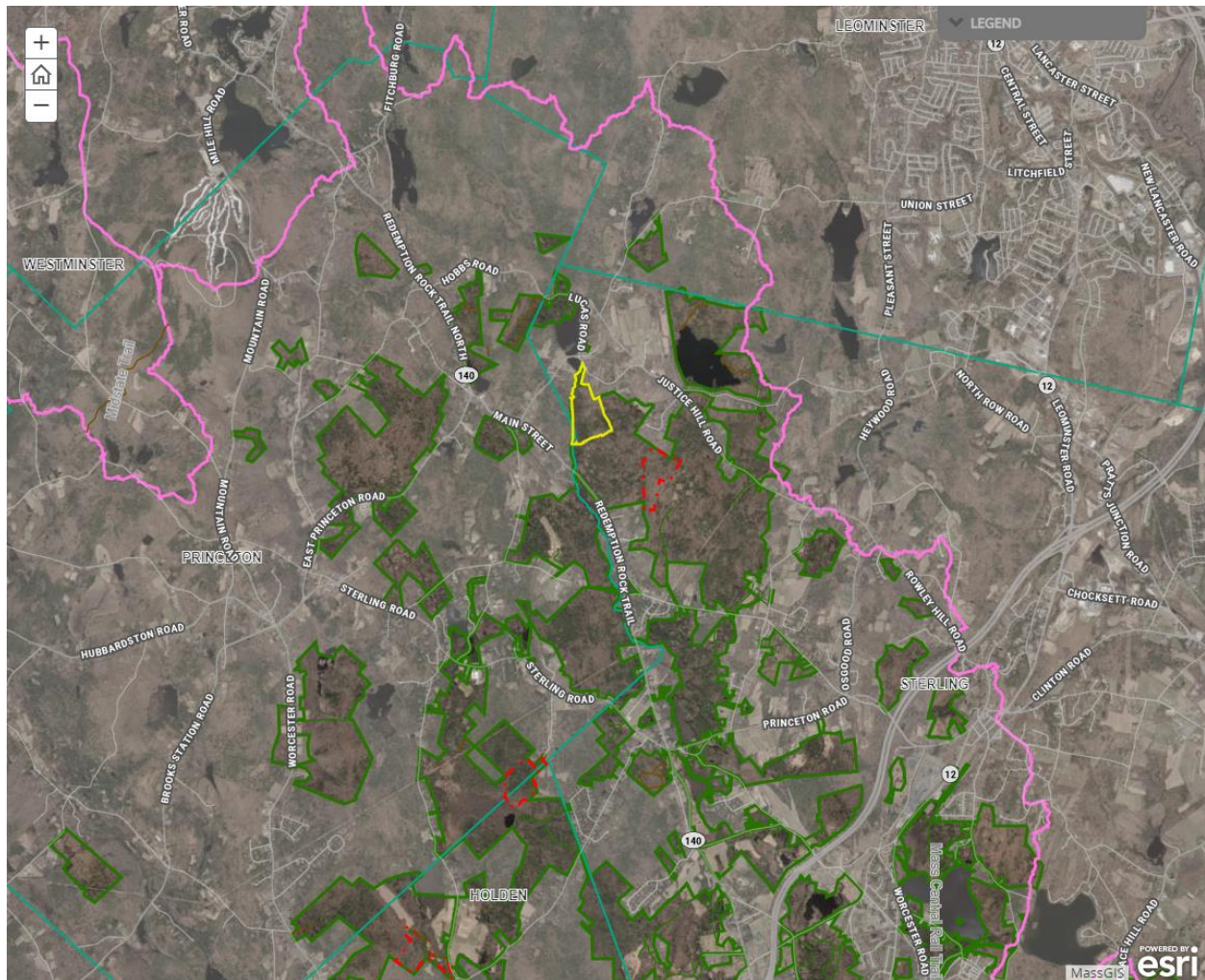
## **Proposal Goals**

With limited advance regeneration present, the goal will be to encourage the establishment of a diverse mix of young trees through the partial removal of the nearly 100 year old overstory.

## **Proposal Location**

The north side is bound by Justice Hill Cutoff; east side partially by property boundary lines and by an internal stone wall; the south side by an old fence that demarcates the former boundary line between the Baker and Davis Farm properties; and the west side by property boundary line which closely parallels Justice Brook.

**Total Acres: 74**



## General Description

	Overstory Type(s)	Acres
<b>Dominant</b>	White pine - hemlock	27
<b>Secondary</b>	Oak - hardwoods	21
<b>Other</b>	Northern red oak	13

	Understory Type(s)
<b>Dominant</b>	Mesic site - witch hazel, highbush blueberry
<b>Secondary</b>	Mountain laurel prevalent

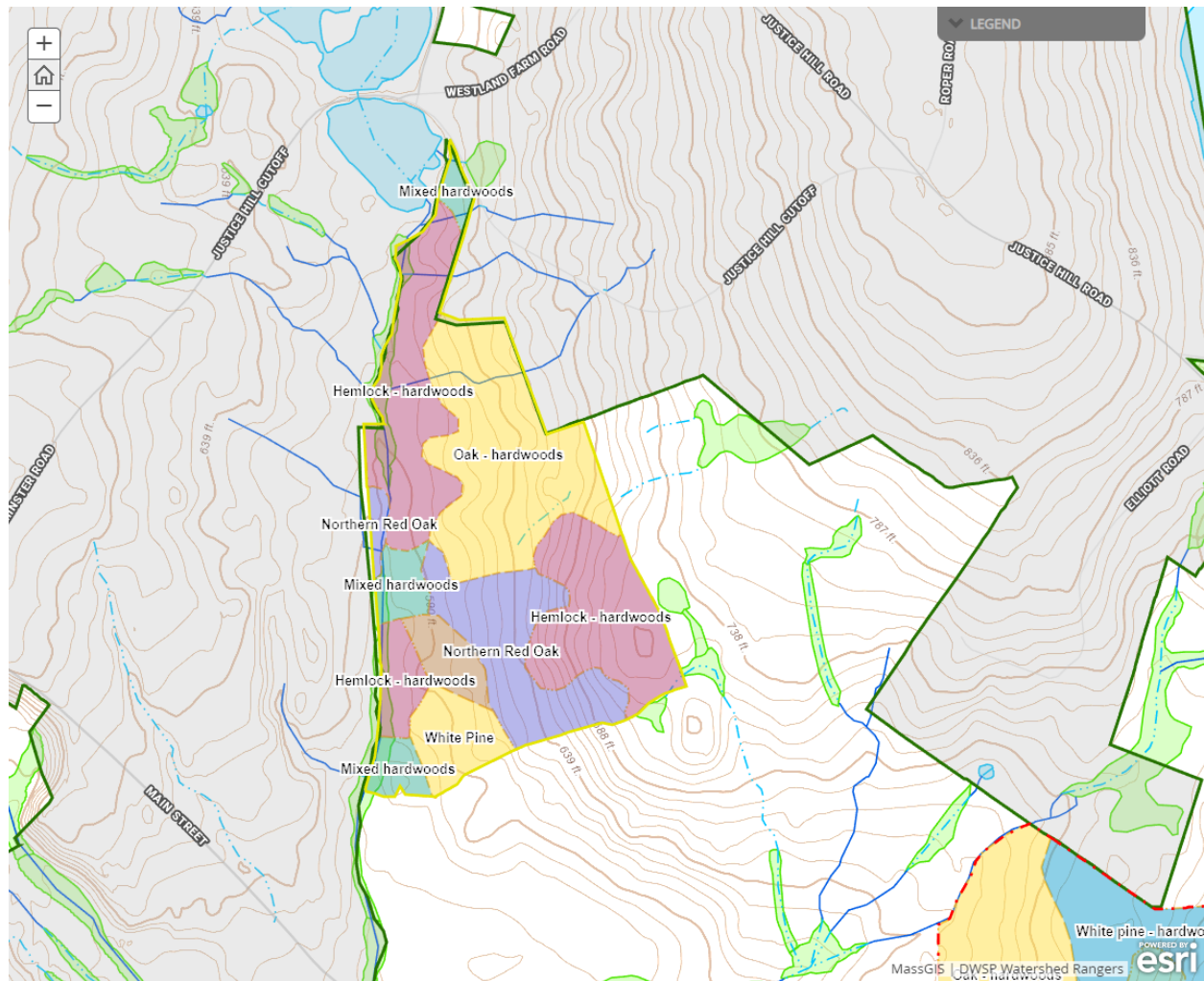
**Description of forest composition/condition:**

The forest on this west facing hillside above Justice Brook originated in the 1920's and 30's, presumably following pasture abandonment. The dominant species are white pine, red oak, black oak, white oak, hemlock and red maple. Most of the hemlock is in a mid-story position and it is infested with hemlock wooly adelgid. There are also scattered paper birch and bigtooth aspen. Along the intermittent streams and in the wet benches common in this area, white ash, sugar maple and yellow birch are found. A few blackgum are present in a seepy area in the southern end and basswood is present near Justice Brook. Beech is found in scattered pockets particularly in the southern half of the area. The understory is dominated by mountain laurel in the southern end of the area while witchhazel is more common in the north. There's essentially no understory in the white pine-hemlock stand on the top of the hill in the southeast portion of this area. With white pine in the overstory and a mid-story dominated by hemlock, this area was a heavily used winter deer yard for many years. This no longer seems to be the case...perhaps the thinning of the hemlock foliage by hemlock wooly adelgid is the cause.

There is evidence of logging (e.g. old stumps and basal wounds) that took place roughly 30 years ago prior to MDC acquisition which occurred in 1997. The age structure is as follows; 0%, 0-20 years old; 0%, 21-40 years; 0%, 41-60 years; 0%, 61-80 years; 99%, 81-100 years and 1%, >100 years old.

**Assessment of Terrestrial Invasive Species:**

Sampling did not find any terrestrial invasives.

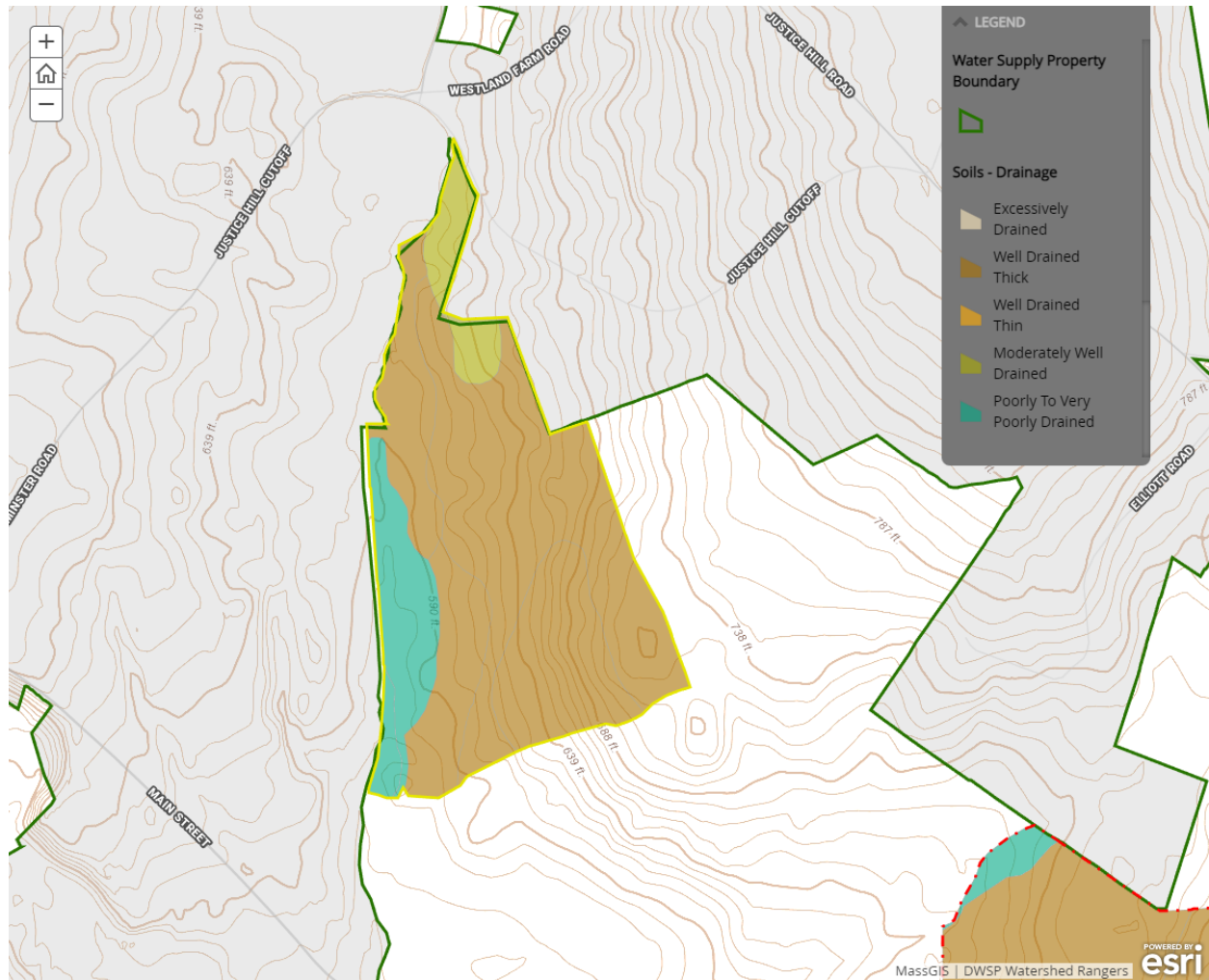


## Soils

Drainage Class	%
Excessively Drained	0
Well Drained Thin	0
Well Drained Thick	82
Moderately Well Drained	7
Poorly to Very Poorly Drained	11



The well-drained thick soils are the Paxton and Canton fine sandy loams. The moderately well-drained soil is the Woodbridge fine sandy loam and the poorly drained soil is the Whitman loam.



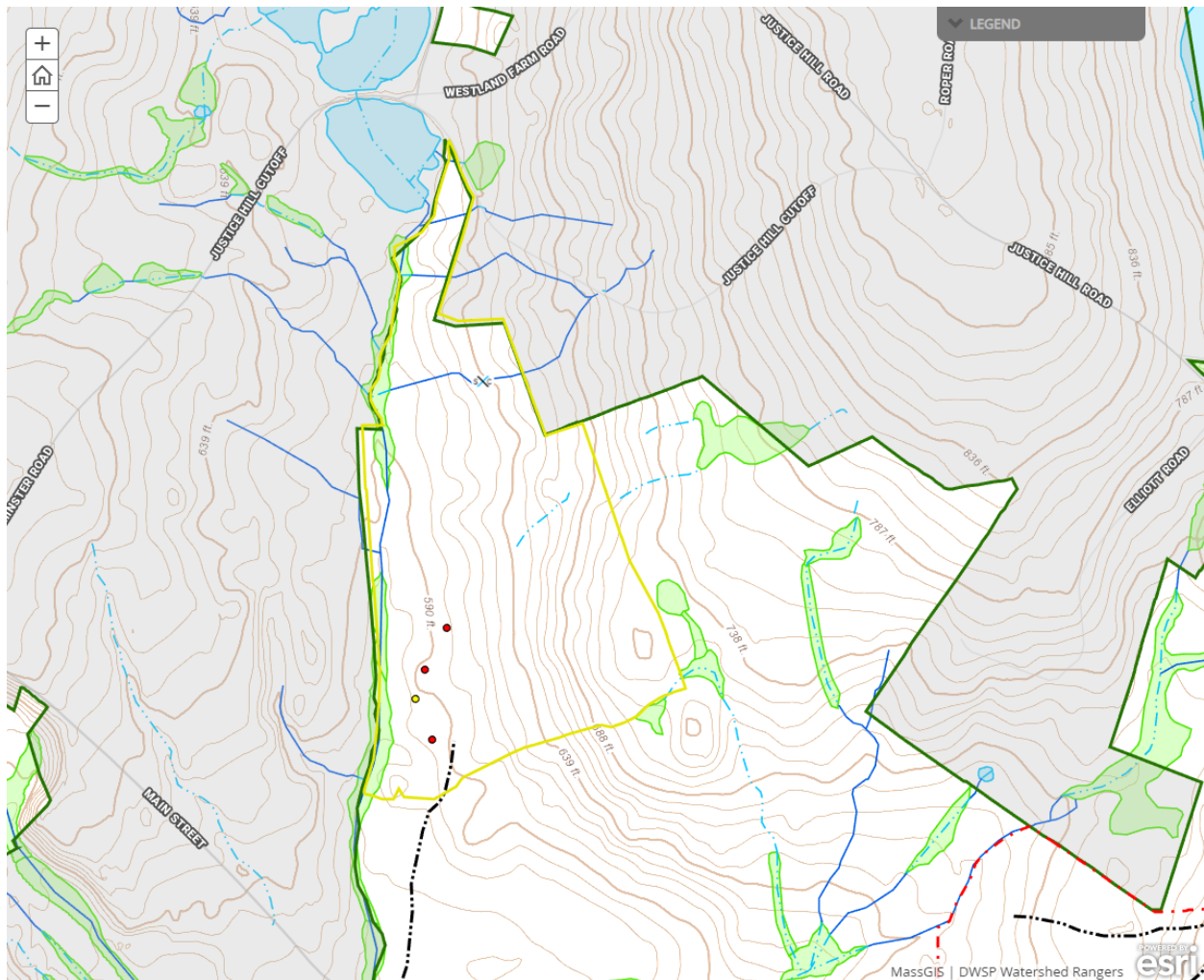
## Wetlands

- Wetlands present? - **Yes**
- Streams present? - **Yes**
- Vernal pools present? - **Yes**
- Seeps present? - **Yes**
- Are stream crossings required? - **Yes**
- Are wetland crossings required? - **No**
- Is logging in filter strips planned? - **No** ([Riparian Zone Mgt](#))
- Is logging in wetlands planned? - **No**

Justice Brook with it's narrow bordering vegetated wetland flows southerly along the western edge of this sale area. There are several very small intermittent streams in the northern end of this area that flow westerly, joining Justice Brook. There's a very small intermittent stream in

roughly the center of the area that disappears about half way down the slope when it flows into a bench on the hillside and reappears near the bottom of the slope as a seep.

Several vernal pools were verified in the southwestern corner.



## Silviculture

Acres in Intermediate cuts: **0**

Acres in prep/establishment cuts: **50**

Acres in Regeneration cuts: **10**

Average regen opening size: **1**

Maximum regen opening size: 2

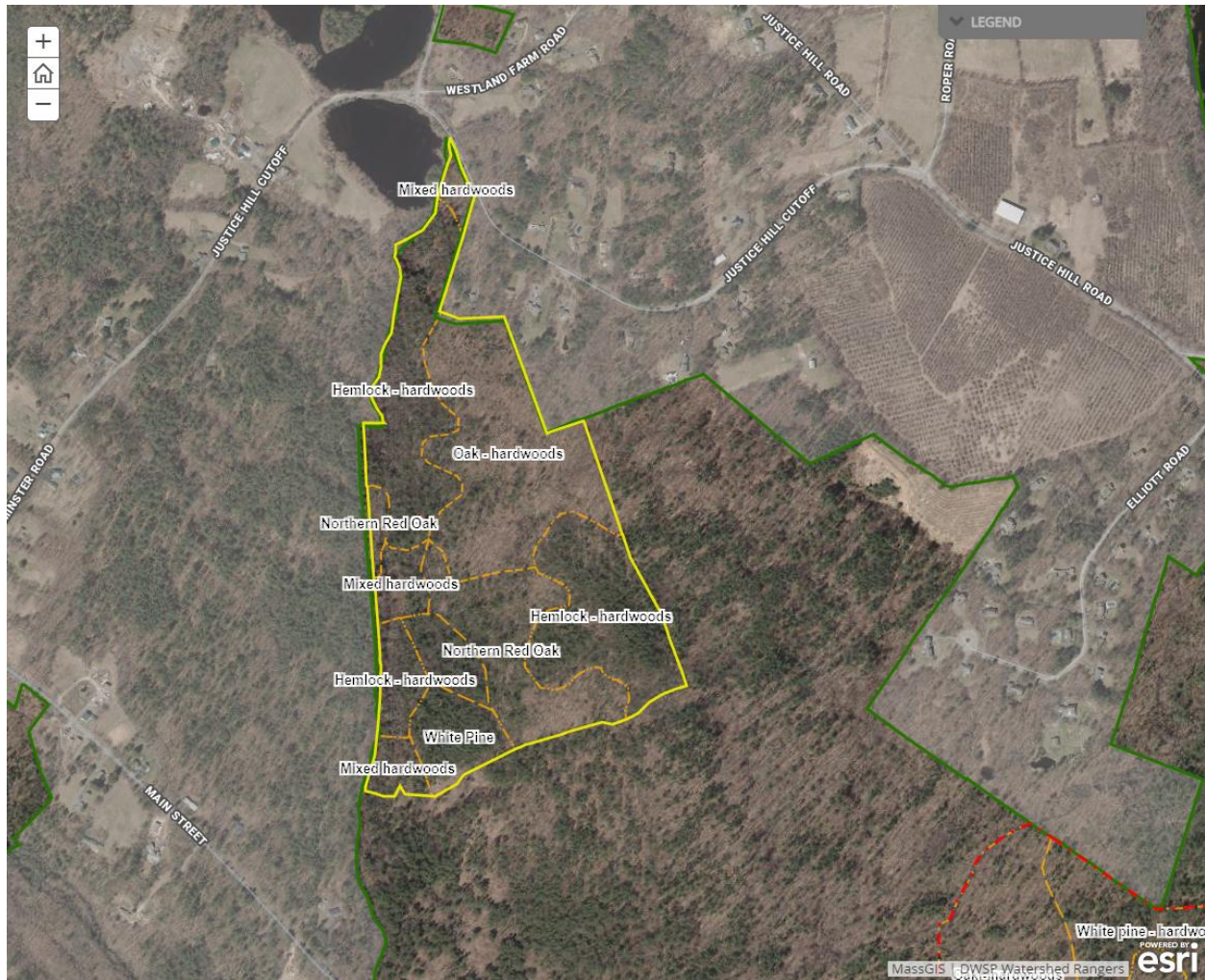
**Description of advance regeneration in proposal area:**

Adequate advance regeneration was found in only 6% of the plots that were evenly distributed across this area. There was marginally adequate regeneration in 20% of the plots. When present, the advance regeneration is comprised primarily of red maple, black birch, hemlock and red oak. Less common are sugar maple, yellow birch, black cherry, white pine, white ash, beech and eastern hophornbeam.

**General comments on silviculture proposed:**

Where adequate advance regeneration exists, openings will be made in the overstory to give it the light and space it needs to continue to grow and thereby create a new age cohort in this even-aged forest. Given that only 6% of the plots had adequate regeneration present, it is not anticipated that these overstory removal areas will comprise more than about 10 acres.

Throughout much of the rest of the area, the goal will be to encourage the establishment of regeneration through the partial removal of the overstory. Given the soils, this site is well suited to growing hardwoods and so it is anticipated that hardwoods will comprise the majority of the new regeneration just as they comprises the majority of the advance regeneration.

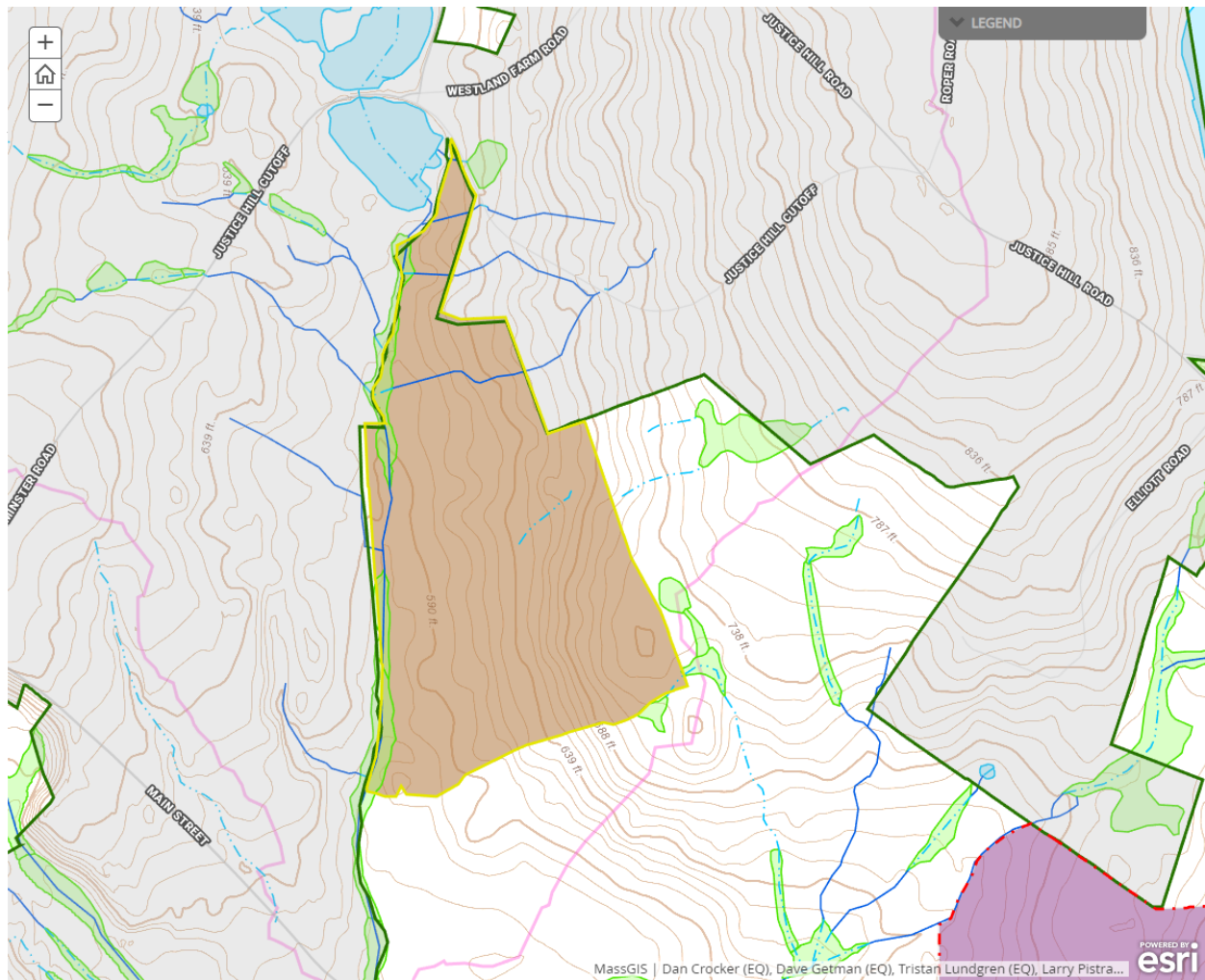


## Subwatershed Analysis

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
19 (North Stillwater/ Keyes Brook)	709	10	699	74

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





## Harvesting Limitations

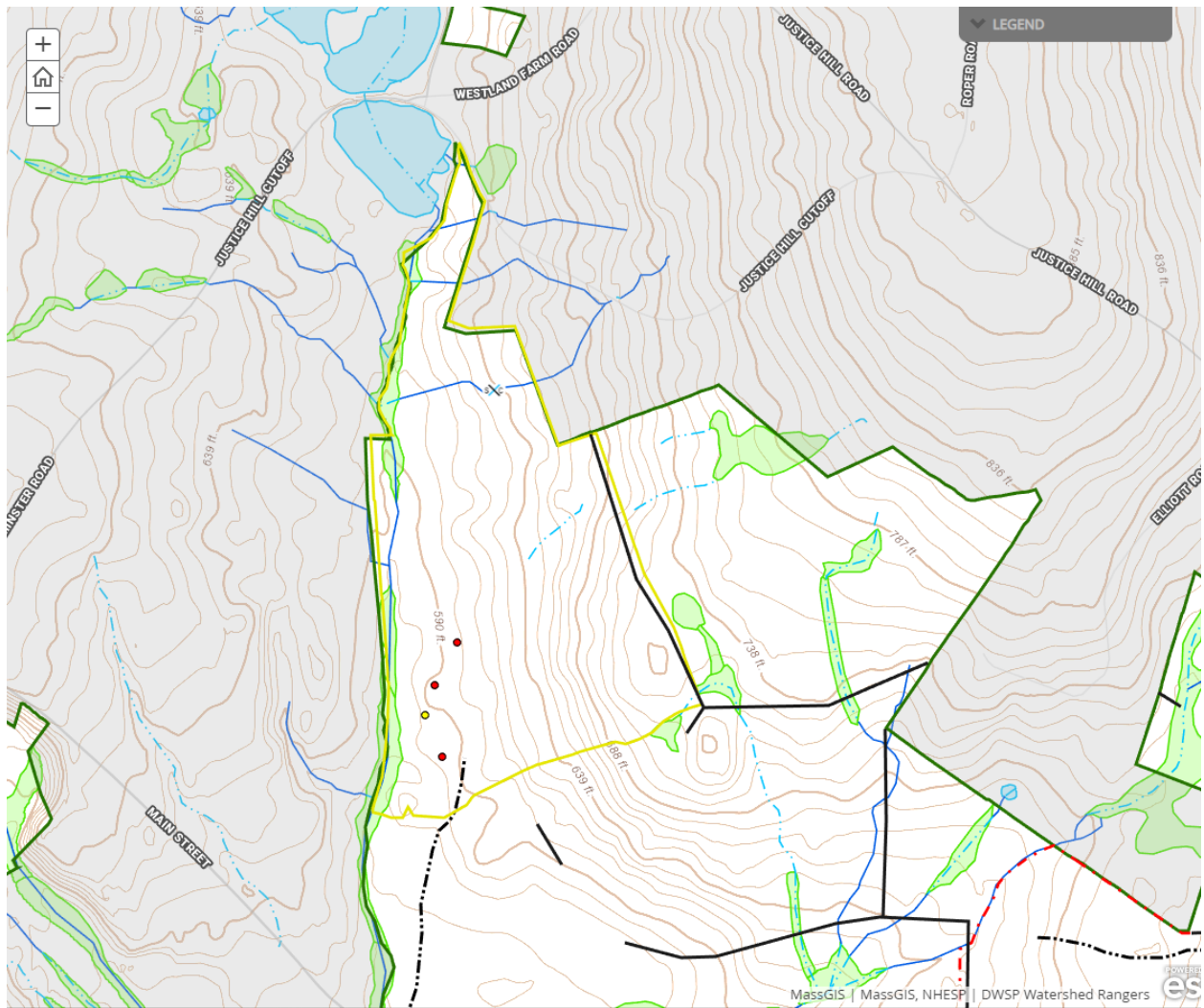
Forwarder required: **Yes**

Feller/processor required: **Yes**

Steep slopes present: **No**

### Comments on harvesting limitations:

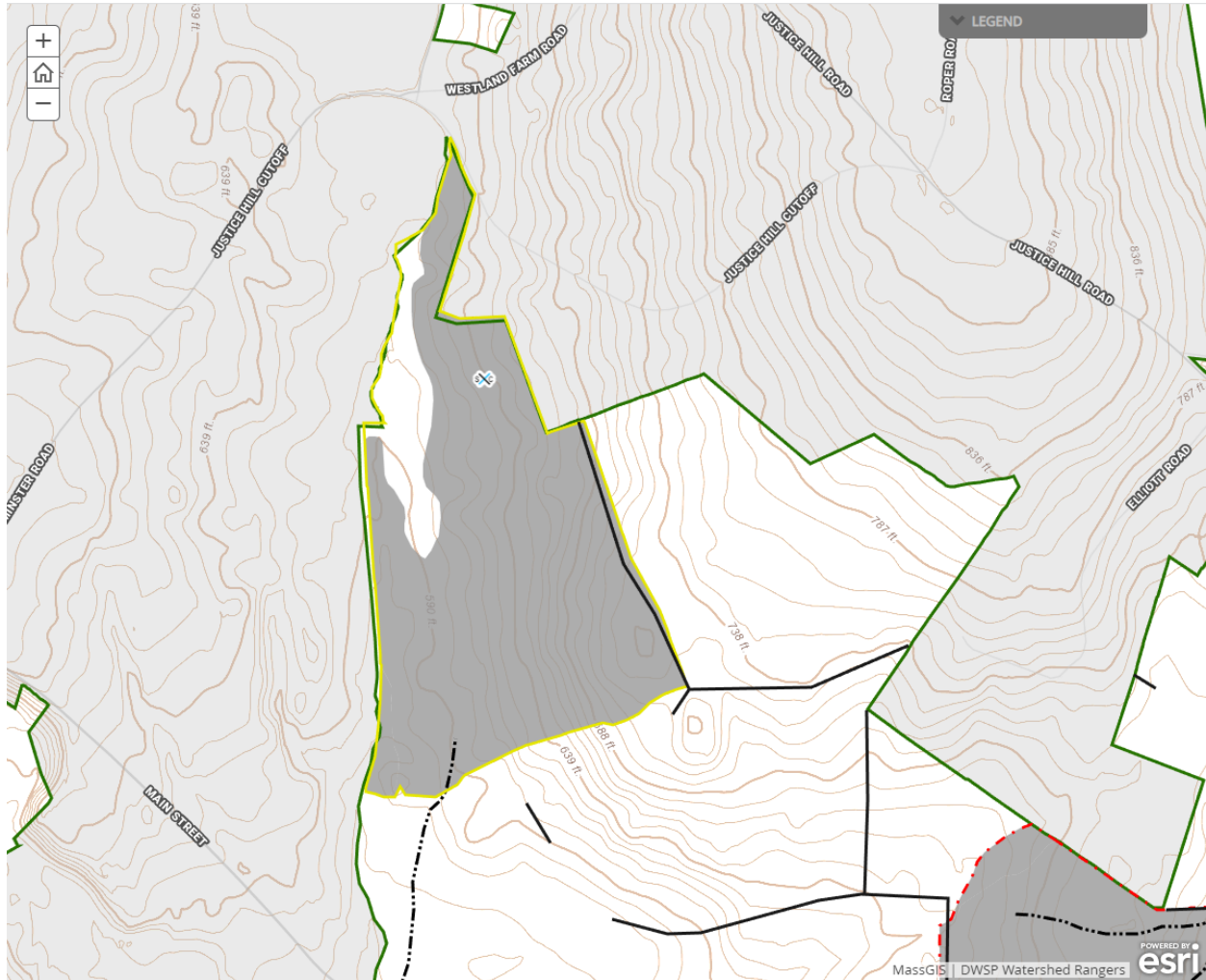
With advance regeneration present and a desire to protect as much of it as possible during the harvest, a cut-to-length harvesting system will be employed.



## Cultural Resources

### Comments on Cultural Resources:

No known cultural resources. Surface stone prevalent throughout.



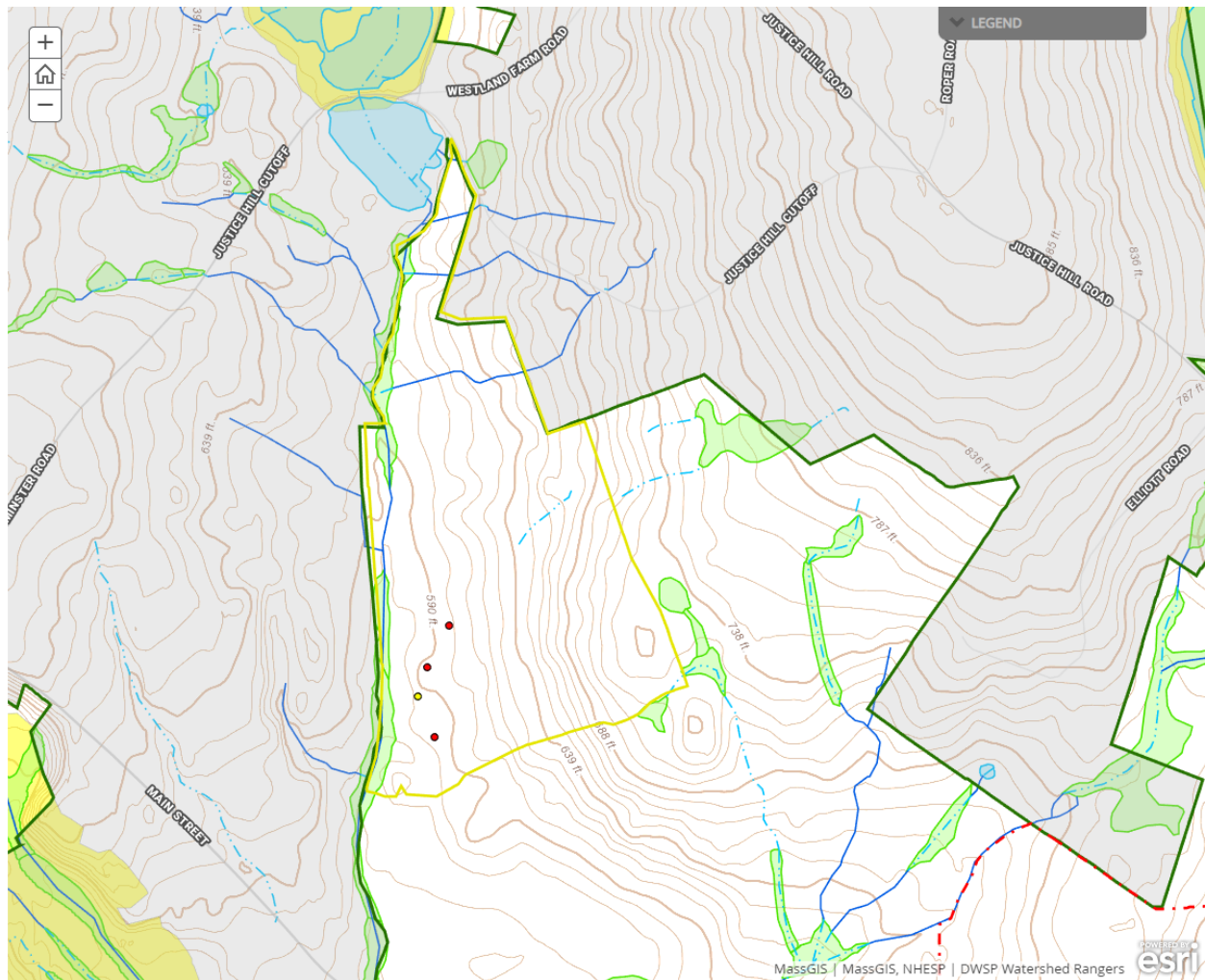
## Wildlife Resources & Rare and Endangered Species

### General Wildlife Comments:

The white pine-hemlock stand on the top of the hill in the southeast part of this area was for many years a heavily used winter deer yard. This no longer seems to be the case. Many hemlock in the white pine-hemlock stand on the top of the hill show evidence of moose browse.

### Comments on Rare Species/Habitats:

No known rare species or habitats in the proposal area.



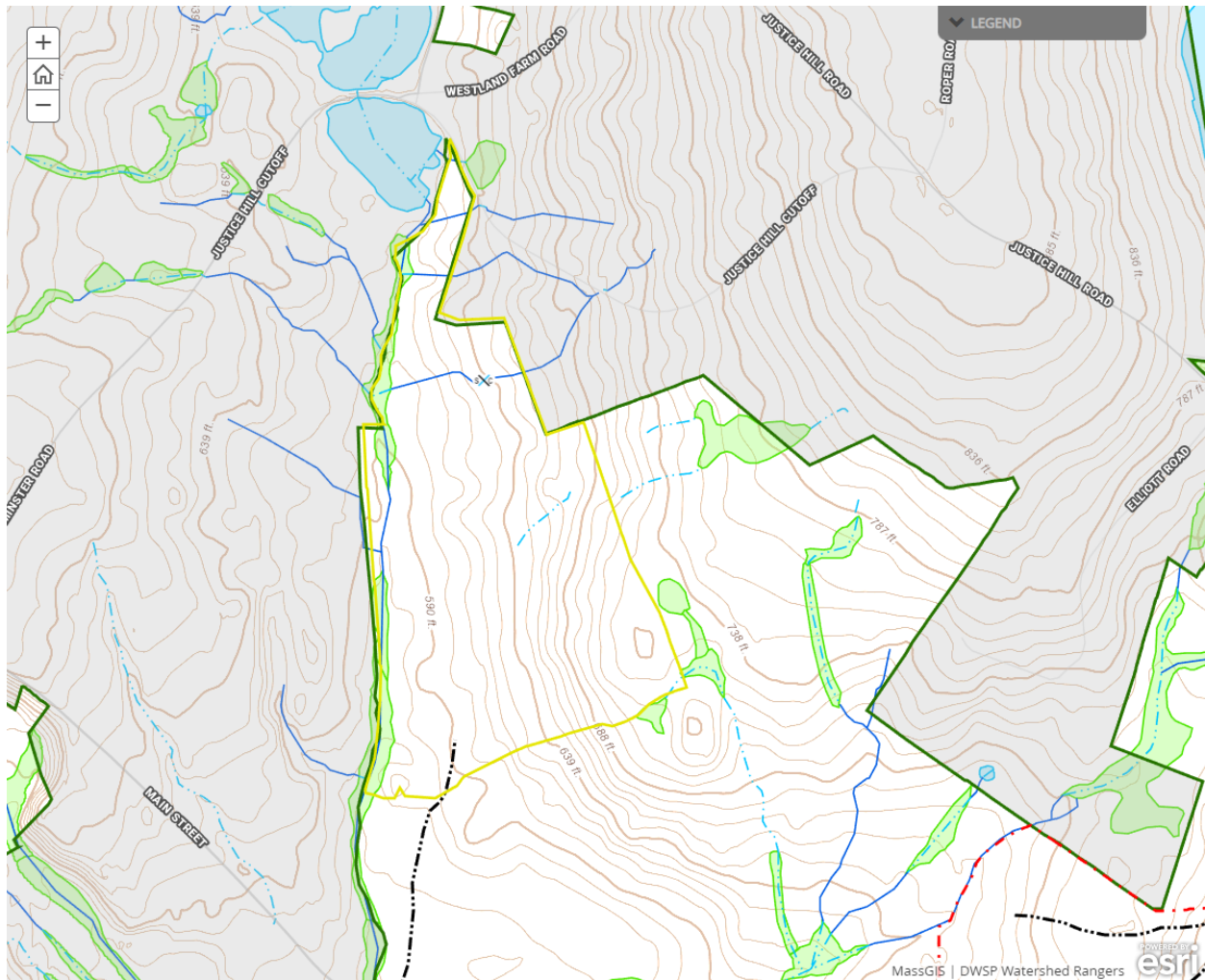
## Environmental Quality Engineering

### Comments on EQ Issues:

The only stream crossing is over an intermittent stream (the third mapped stream south from the northern end of this area). If used this will be monitored by EQ.

Further south, the main forwarder road through the lot will cross the centrally-located east-west intermittent drainage where it flows through boulder voids under the surface for about 200', avoiding the need for crossing structures.





## Forest Access Engineering

**Gravel needed:** No

**Landing work needed:** No

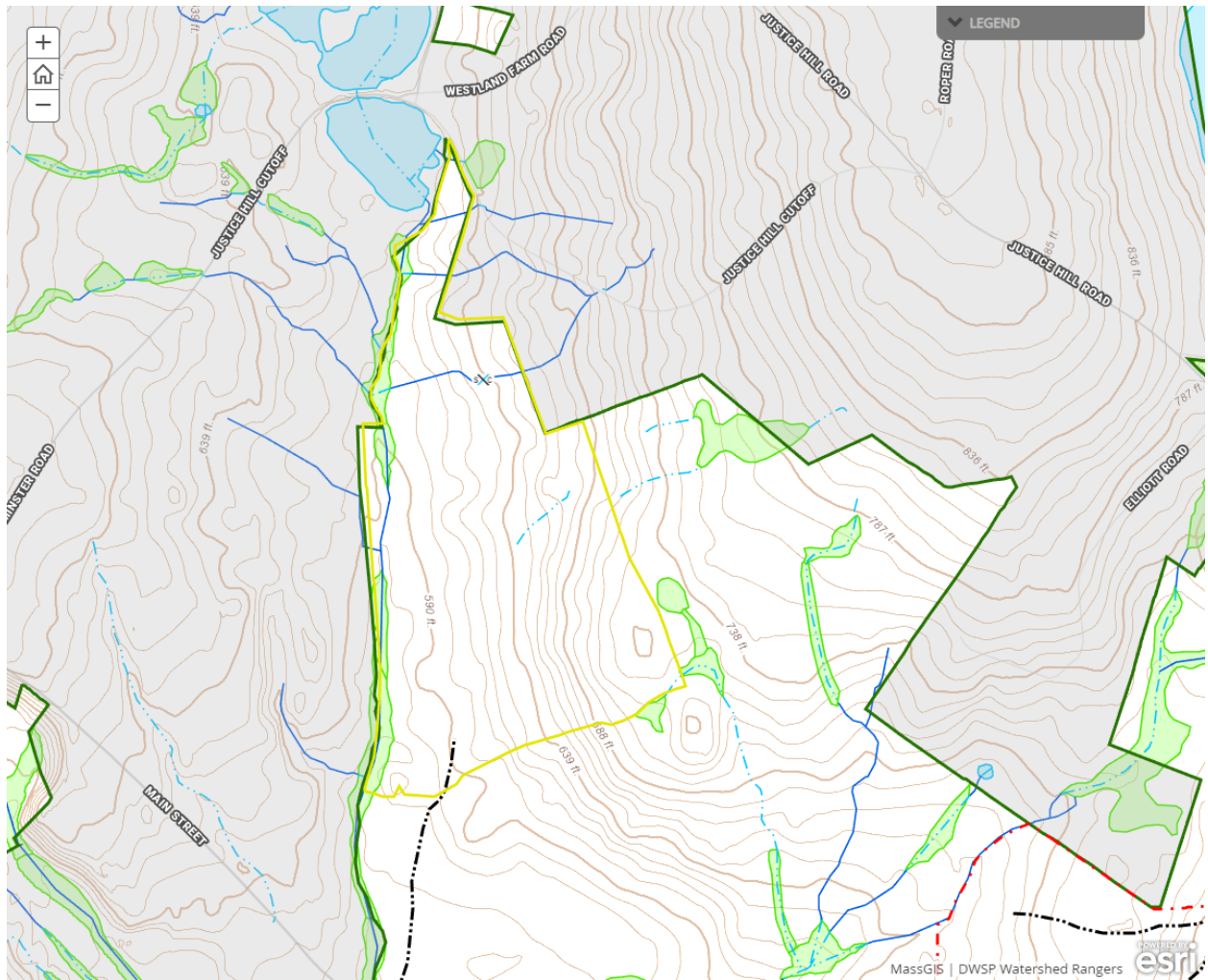
**Culverts needed:** No

**Work needed on permanent bridges:** No

**Beaver issue:** No

**Further comment on access needs:**

No issues with access.



**DWSP Gates**

**Landings**

**Crossings**

Xng

Stream Crossing

**QWR Culverts**

Purpose

- Stream Crossing-B
- Stream Crossing-C
- Drainage Relief-D
- Unknown

**Quabbin Road Intersections**

**DCR/DWSP Trail/Road Data (Public View)**

Type

- Public Road
- Administrative Road
- Forest Road/Trail
- Trail
- Other

**DCR-DWSP Trails and Roads**

Type

- Administrative Road
- Forest Road/Trail
- Other
- Public Road
- Trail

**Wachusett/Sudbury Road Infrastructure**

Infrastructure\_Type

- Bridge
- Broad Based Dip
- Checkdam
- Culvert
- Ditch
- Ford
- Waterbar
- Other

**Wachusett Internal Roads**

Priority:

- Access Road, unmaintained
- Access Road

**QWWS Watershed Boundaries**

**Vernal Pools**

Status

- Not a vernal pool
- Potential vernal pool
- DCR verified vernal pool

**Streams - Quabbin**

FType

- Coastline/Shoreline
- Stream/River
- Swamp/Marsh
- Submerged Stream
- Artificial Path
- Canal/Ditch
- Pipeline
- Dam/Weir
- Connector
- Unknown
- Other

**Water Bodies - Quabbin**

FType

- Reservoir
- Lake/Pond
- Stream/River
- Swamp/Marsh

**Streams - Ware River**

FType

- Stream/River
- Canal/Ditch

**Water Bodies - Ware River**

FType

- Reservoir
- Lake/Pond
- Stream/River
- Swamp/Marsh
- Other

**Streams - Wachusett**

EQ\_Stream\_Type

- Aqueduct
- Ditch/Canal
- Intermittent Stream
- Perennial Stream

**Waterbodies - Wachusett**

EQ\_Wetland\_Type

- Reservoir
- Lake, Pond, Wide River, Impoundment
- Wetland, Marsh, Swamp, Bog

**NHESP Priority Habitats**

**NHESP Certified Vernal Pools**

NHESP Certified Vernal Pools

**Forest Cover Type - Filled**

**CoverTypeFull**

- White Pine-Hardwoods
- Oak-Hardwoods
- White Pine-Oak
- WetHard
- Mixed Hardwood
- White Pine
- Grasses and Forbs
- White Pine-Hemlock
- Mixed Oak
- Northern Red Oak
- Red Maple
- Powerline
- WetMixed
- Error - Not DWSP
- Red Pine
- Shrub Swamp
- Upland Brush
- Northern Hardwood
- Road
- Beaver Pond
- Hemlock
- Hemlock-Hardwoods
- Mixed-Oak
- Norway Spruce
- Pitch Pine
- WetCon
- Abandoned Orchard
- Black Birch-Hardwoods
- Gravel Pit
- Northern Hardwoods
- Pitch Pine-Oak
- Water
- Oak, Mixed
- White pine - oak
- Mixed hardwoods
- Hemlock - hardwoods
- White pine - hardwoods
- Black Birch-Hardwood
- Field, mowed
- Oak - hardwoods
- Abandoned Field
- Beaver Meadow
- Chestnut Oak Heath
- Mixed hardwood
- White pine/hardwoods

**Forest Cover Type - Outline**

**Subwatersheds (QWWS-filled)**

**Subwatershed Name**

- ASNEBUMSKIT BROOK
- Barre Falls
- Belchertown Shoreline
- Blackington Swamp
- Cadwell Creek
- Cunningham
- East Br. Fever Brook
- East Prescott North
- Fed. Forest Stream
- Gate 20 Rd. Stream
- Gate 52 Shoreline
- Gates Brook
- Gibbs Brook
- Josslin
- Juckett Hill East
- MIDDLE STILLWATER/ROCKY/WILDER BROOK
- Mary Tamplin Drainage
- Middle Br. Swift Lower
- Moosehorn Brook
- NORTH STILLWATER/KEYES BROOK
- Northeast Shoreline
- Parker
- Prescott Brook
- Quabbin Park East
- RES. SHORELINE EAST
- Sherer Rd. North
- TROUT BROOK
- Thurston Brook
- Underhill Brook
- WACHUSETT BROOK
- Ware
- West Prescott Middle
- West Prescott North
- West Prescott South
- Whitney Hill Southeast
- Whitney Hill West
- Other

**Subwatersheds (WA-outline)**

**SubWatersheds (QWR-outline)**

**Subwatersheds**

**Forestry Proposal Boundaries**

**Towns**

**Water Supply Property Boundary**

**Proposed Skid Trails**

**Stone Walls - WA**

**StoneWalls - QWR**

**Stony Soils**

Stoniness

- extremely stony
- very stony

**Soils - Drainage**

Drainage Class

- Excessively Drained
- Well Drained Thick
- Well Drained Thin
- Moderately Well Drained
- Poorly To Very Poorly Drained

**Quabbin and Ware River Cultural Resources Inventory (Public view)**

Type

- No Value/Blank
- Agrarian
- Cellar Hole
- Civic
- Commercial
- Industrial
- Military
- Other
- Residential
- Shed
- Unknown

**QWWS Percent Slope**

- 0 - 7
- > 7