

# Wachusett Harvest Proposal WA-22-315

## 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. Logging prior to DCR acquisition of this property resulted in the establishment of diverse advance regeneration throughout the area.

## Proposal Location

Located in Holden. (The following is a description of the boundary for the area where management will occur and not for the working unit as a whole).

The north and east sides are bound by private property none of which is stone wall. The south and west sides are bound by the wetland associated with Warren Tannery Brook.

**Total Acres: 40**



## General Description

	Overstory Type(s)	Acres
<b>Dominant</b>	White pine - oakMixed hardwoods	40
<b>Secondary</b>	Oak, mixed - dry site	7
<b>Other</b>	White pine	3

	Understory Type(s)
<b>Dominant</b>	Tree seedlings/saplings dominate site
<b>Secondary</b>	Mountain laurel prevalent

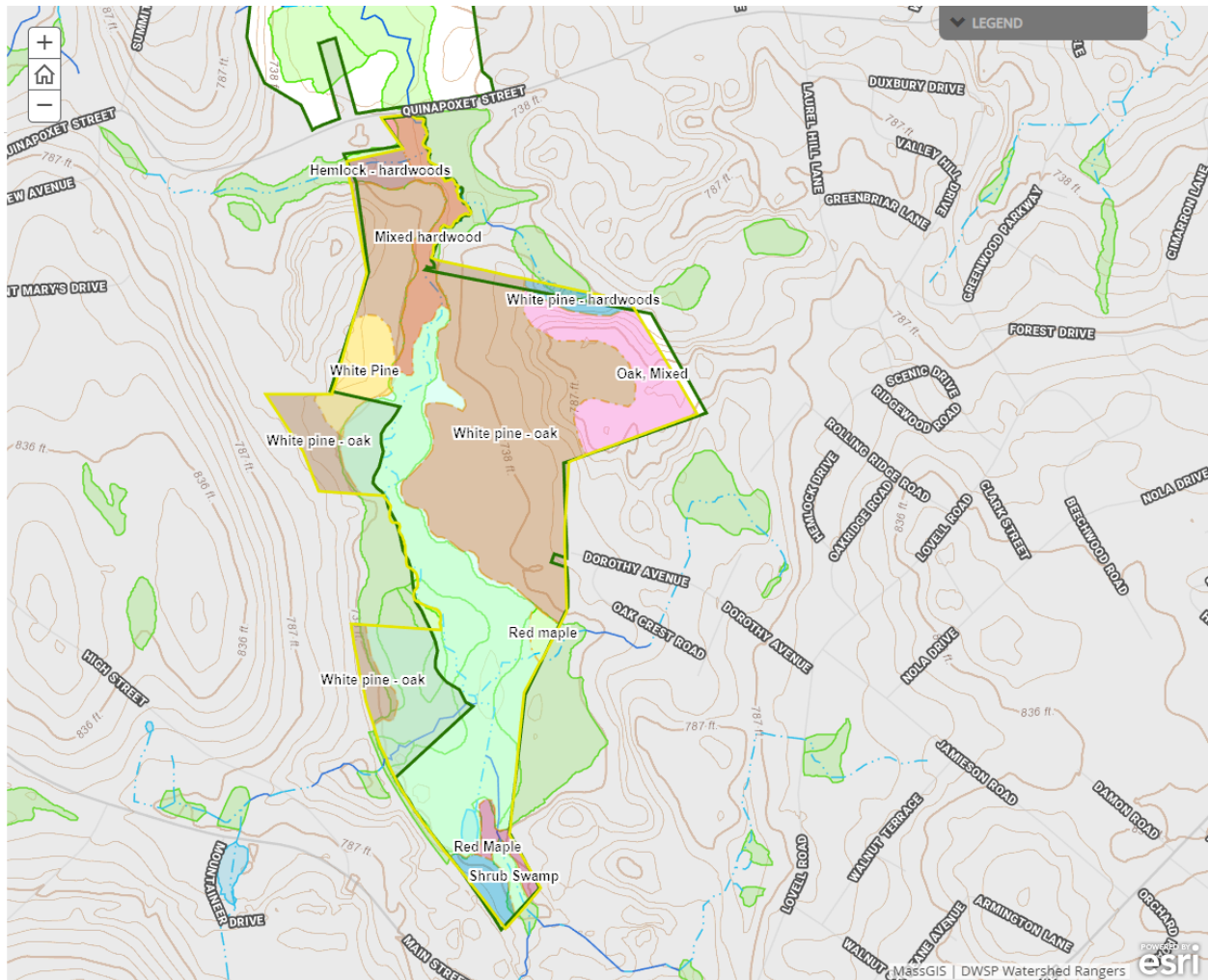
**Description of forest composition/condition:**

The forest overstory in this area is dominated by red oak, white pine, black oak, white oak and red maple. In the southern part of the area there is some black cherry and hemlock as well. In the northern end there are paper birch mixed into the overstory. Most of this property was logged about 30 years ago prior to DCR acquisition. The result has been the establishment of an excellent understory of regeneration. This regeneration is primarily hardwoods in the southern end made up of red maple, red oak, black cherry, bigtooth aspen and some white pine. There is also quite a lot of shadbush. In the northwestern corner of the area where many of the overstory trees have fire scars from a wildfire several decades in the past, there's significantly more oak in the understory. The central and northeastern parts of this area on the hill, along with having much shorter overstory trees also have a far larger component of white pine in the understory. The shrub layer in this area is made up of mountain laurel and huckleberry. In the lower areas in the south end of this working unit there is highbush blueberry along the ubiquitous mountain laurel while sheep laurel is paired with the mountain laurel in the previously burned northwest corner.

The age structure of this area is as follows; 0%, 0-20 years old; 0%, 21-40 years; 0%, 41-60 years; 13%, 61-80 years; 41%, 81-100 years and 46%, >100 years old. The oldest stands date to about 1900 making them just over 120 years old.

**Assessment of Terrestrial Invasive Species:**

Terrestrial invasive species were only found in 1 out of 84 plots taken. There is Asiatic bittersweet present in a small, damp opening in the overstory near the terminus of Dorothy Avenue.



## Soils

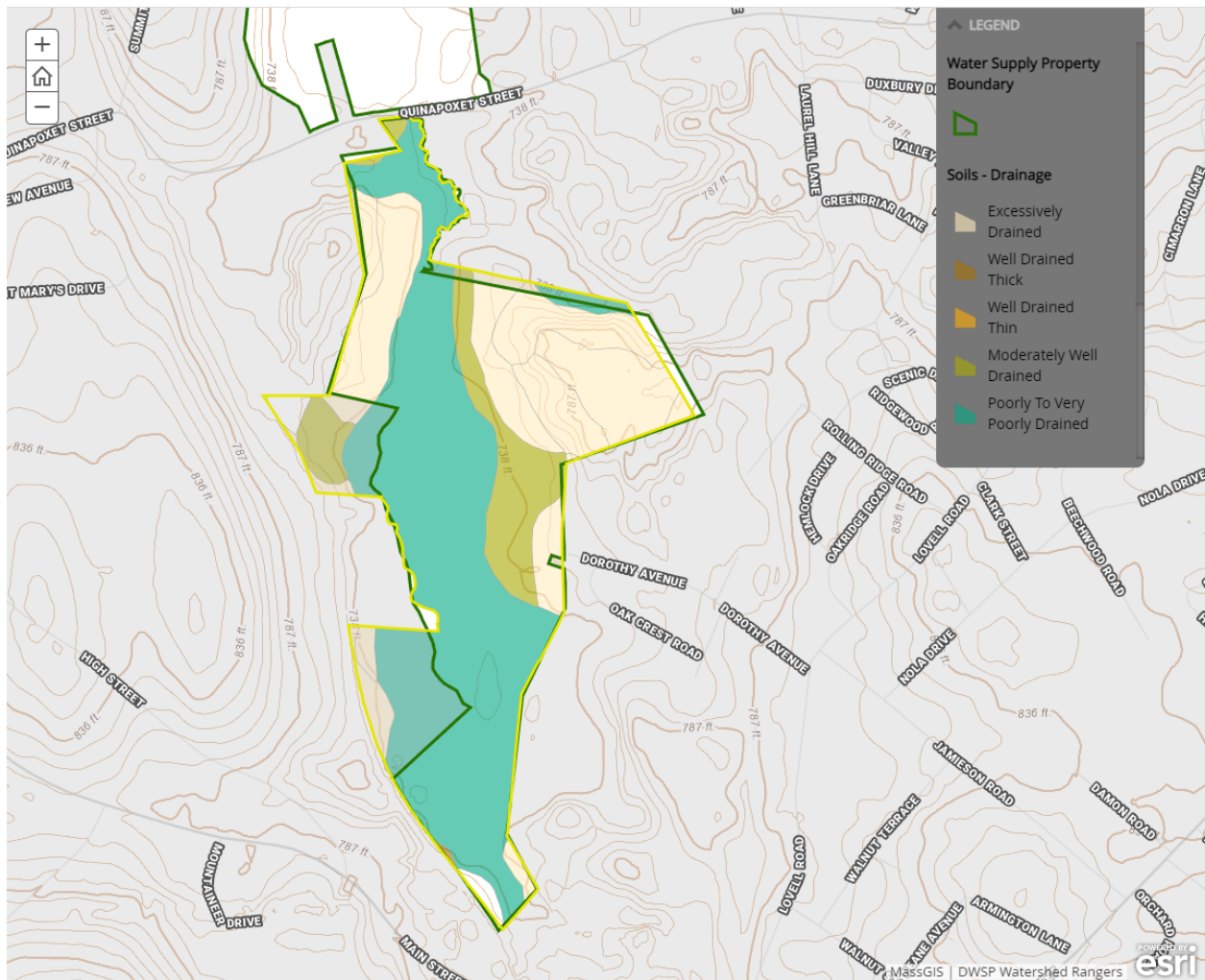
Drainage Class	%
Excessively Drained	55
Well Drained Thin	0
Well Drained Thick	0
Moderately Well Drained	45
Poorly to Very Poorly Drained	0



(This description omits the large wetlands that show as 'poorly drained' on the map.)

The excessively drained soils are associated with the hill in the northern half of the area and are primarily the Windsor, Hinckley and Merrimac loamy sands.

The moderately well drained soil is the Sudbury fine sandy loam.

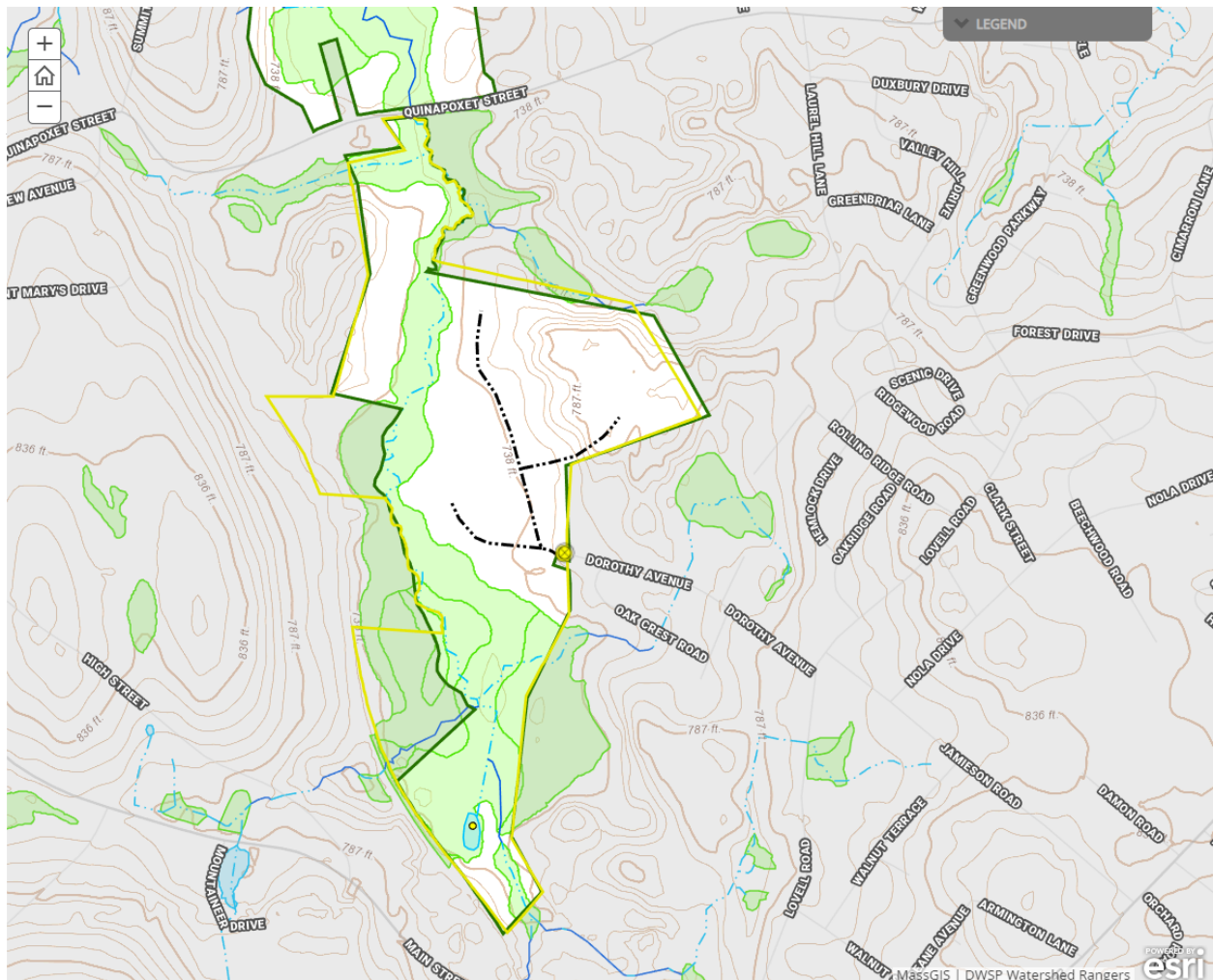


## Wetlands

- Wetlands present? - **Yes**
- Streams present? - **Yes**
- Vernal pools present? - **None known**
- Seeps present? - **None known**
- Are stream crossings required? - **No**
- Are wetland crossings required? - **Yes**

- Is logging in filter strips planned? - No ([Riparian Zone Mgt](#))
- Is logging in wetlands planned? - No

In addition to the large wetland associated with Warren Tannery Brook that forms the western and southern boundary of this area, there is a narrow, forked, unmapped wetland in the western area of this proposed timber sale. It connects the larger wetland on the west side to the same wetland on the south side, and appears to be an old cutoff meander channel that is now dammed up and flooded by beaver. There's about 5 acres of upland forest between this unmapped wetland and the larger mapped wetland.



## Silviculture

Acres in Intermediate cuts: 0

Acres in prep/establishment cuts: 0

Acres in Regeneration cuts: **13**

Average regen opening size: **1**

Maximum regen opening size: **2**

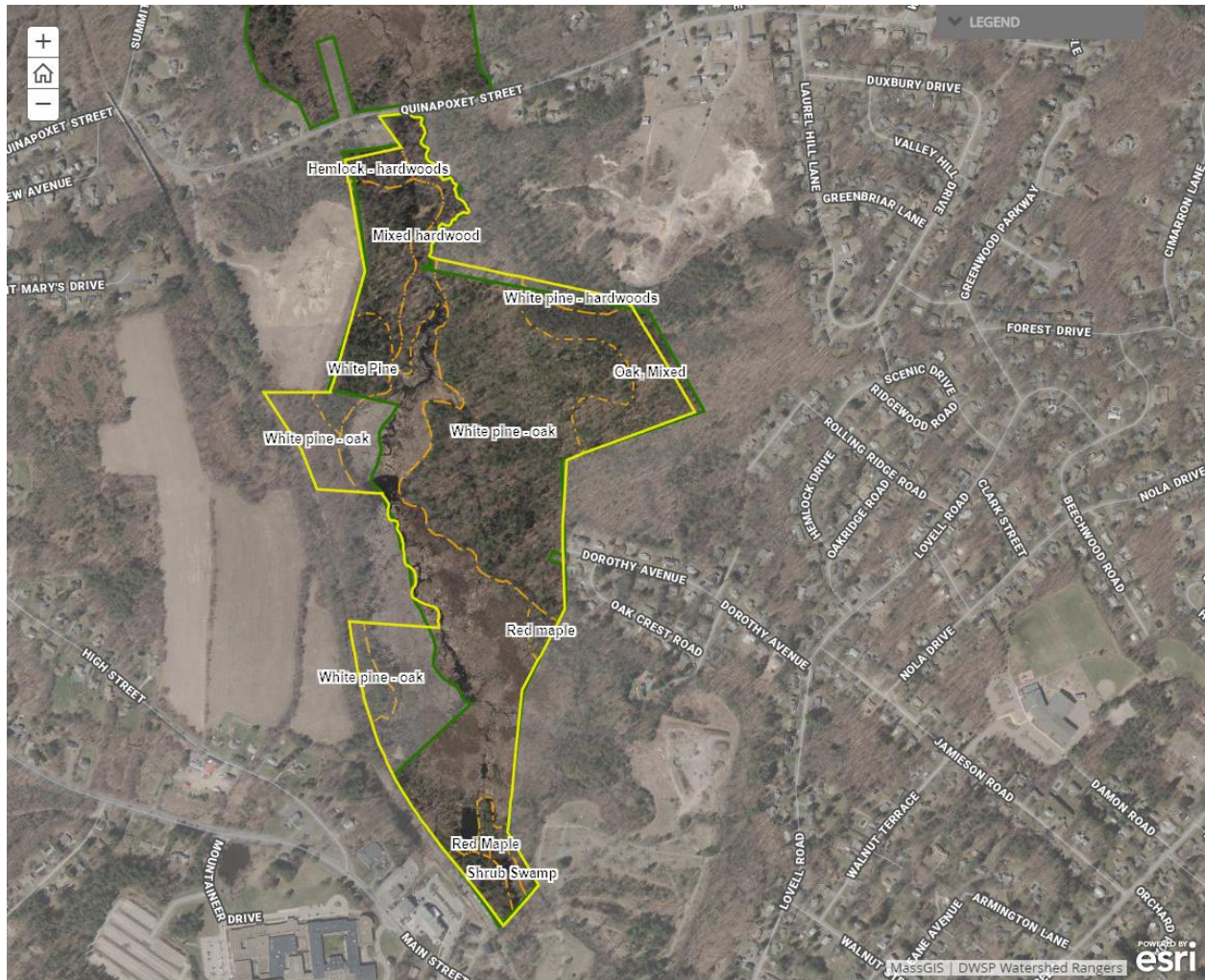
### **Description of advance regeneration in proposal area:**

Sampling found adequate advance regeneration present in 46% of the plots with marginal regeneration present in an additional 20%. Oak was found in 46% of plots. This regeneration is comprised of red maple, white oak, red oak and white pine with lesser numbers of black birch, black cherry, aspen and chestnut.

### **General comments on silviculture proposed:**

Forest management will only be occurring in the 40 acres on the east side of the Warren Tannery Brook wetland. 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 13 acres. This will result in a new age cohort within the forest that makes up about 1/3rd of the area of this 40-acre portion 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; 9%, 61-80 years; 27%, 81-100 years and 31%, >100 years old.



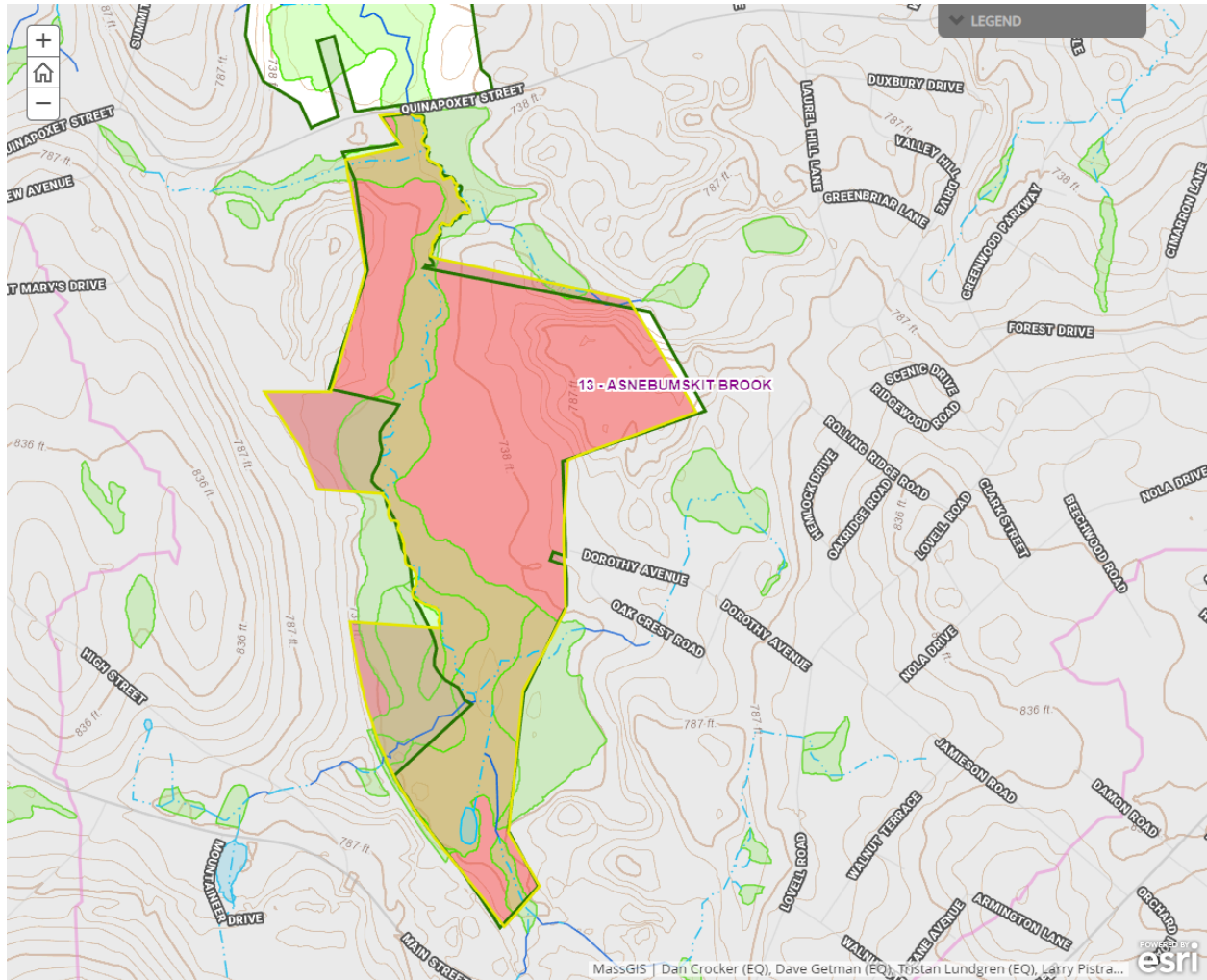


## Subwatershed Analysis

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
13 (Asnebumskit Brook)	169	0	42	40

With 13 acres of harvesting proposed the level of cutting falls below the 25% threshold.





## Harvesting Limitations

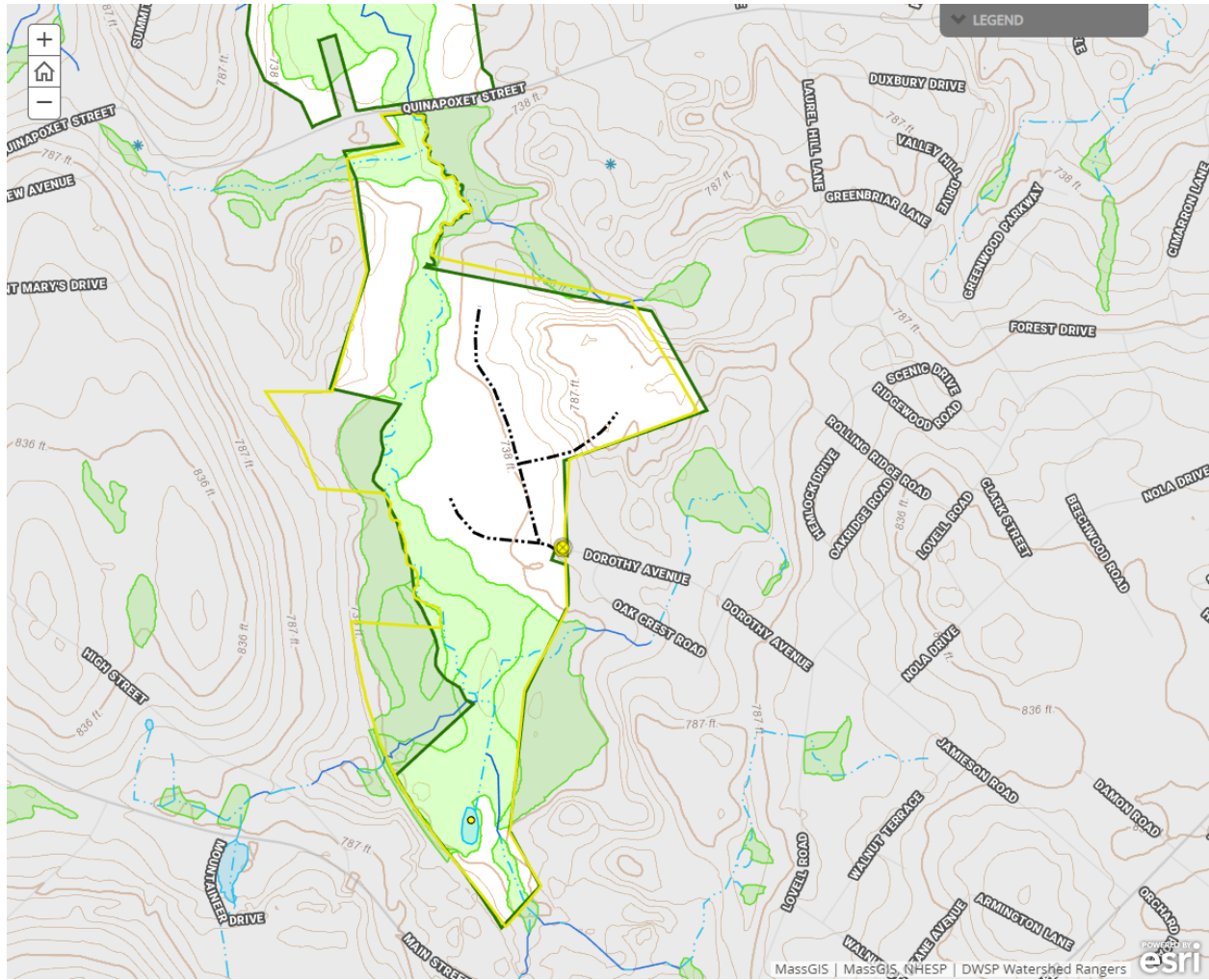
Forwarder required: **Yes**

Feller/processor required: **Yes**

Steep slopes present: **No**

### Comments on harvesting limitations:

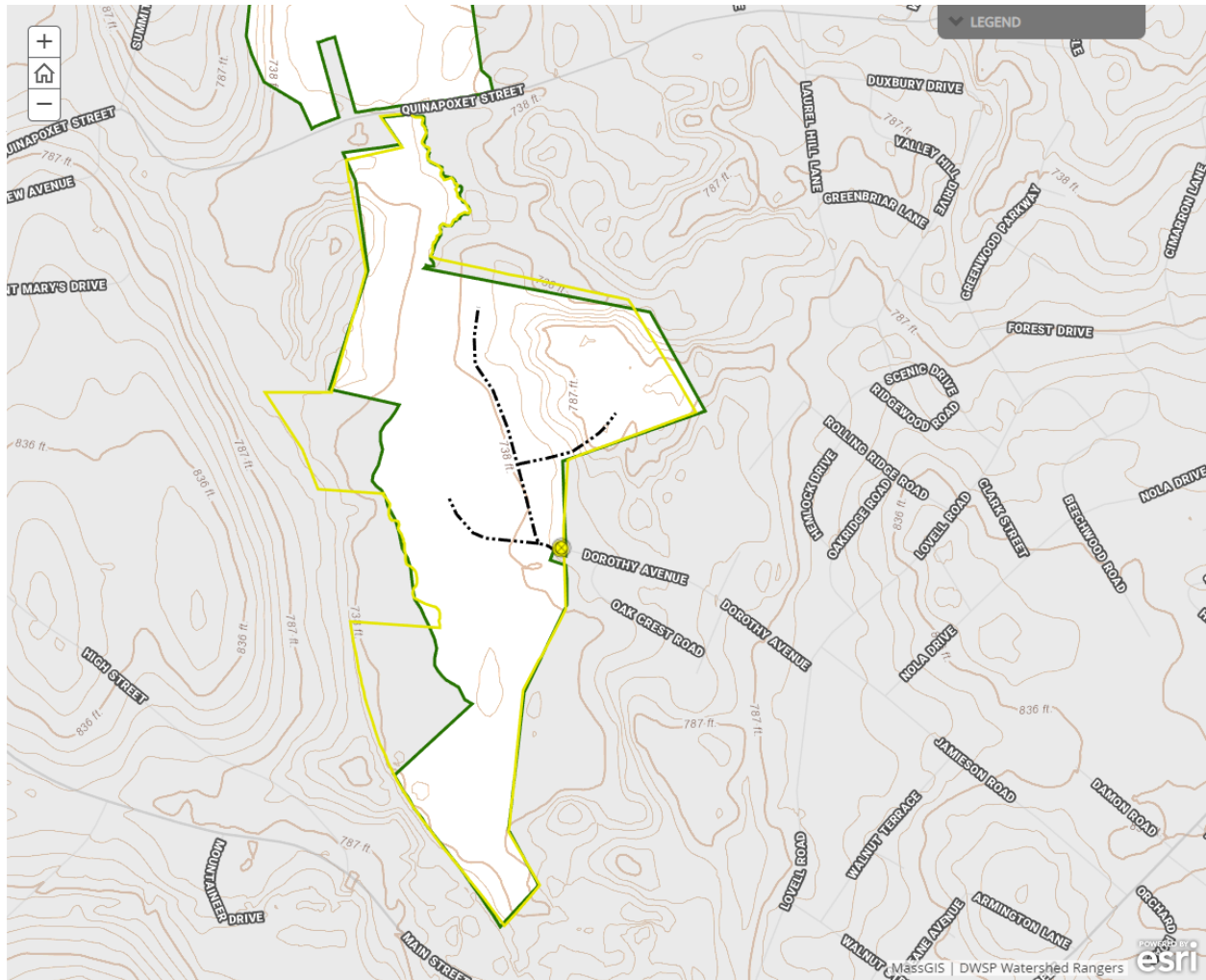
With advance regeneration present and a desire to protect as much of it as possible during the harvest, a cut-to-length harvesting system will be employed.



## Cultural Resources

### Comments on Cultural Resources:

No known historic cultural resources.



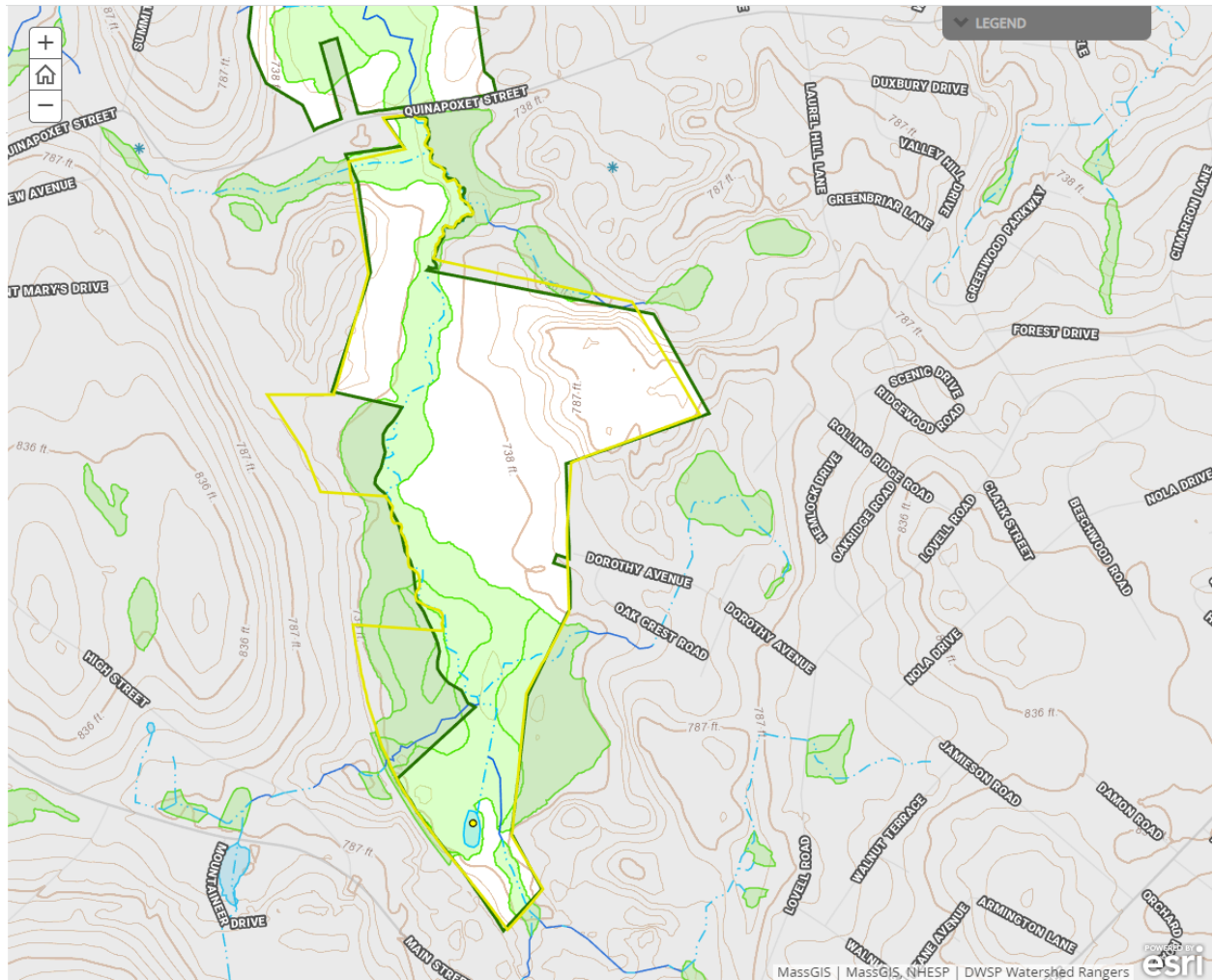
## Wildlife Resources & Rare and Endangered Species

### General Wildlife Comments:

No unusual wildlife observed; some stick nests present. Tannery Brook is considered a Coldwater Fisheries Resource by MA DFW; the proposed harvesting will not cause siltation or alter the shading conditions that are important for the fish species that use these habitats.

### Comments on Rare Species/Habitats:

No rare species or habitats in this proposal area.

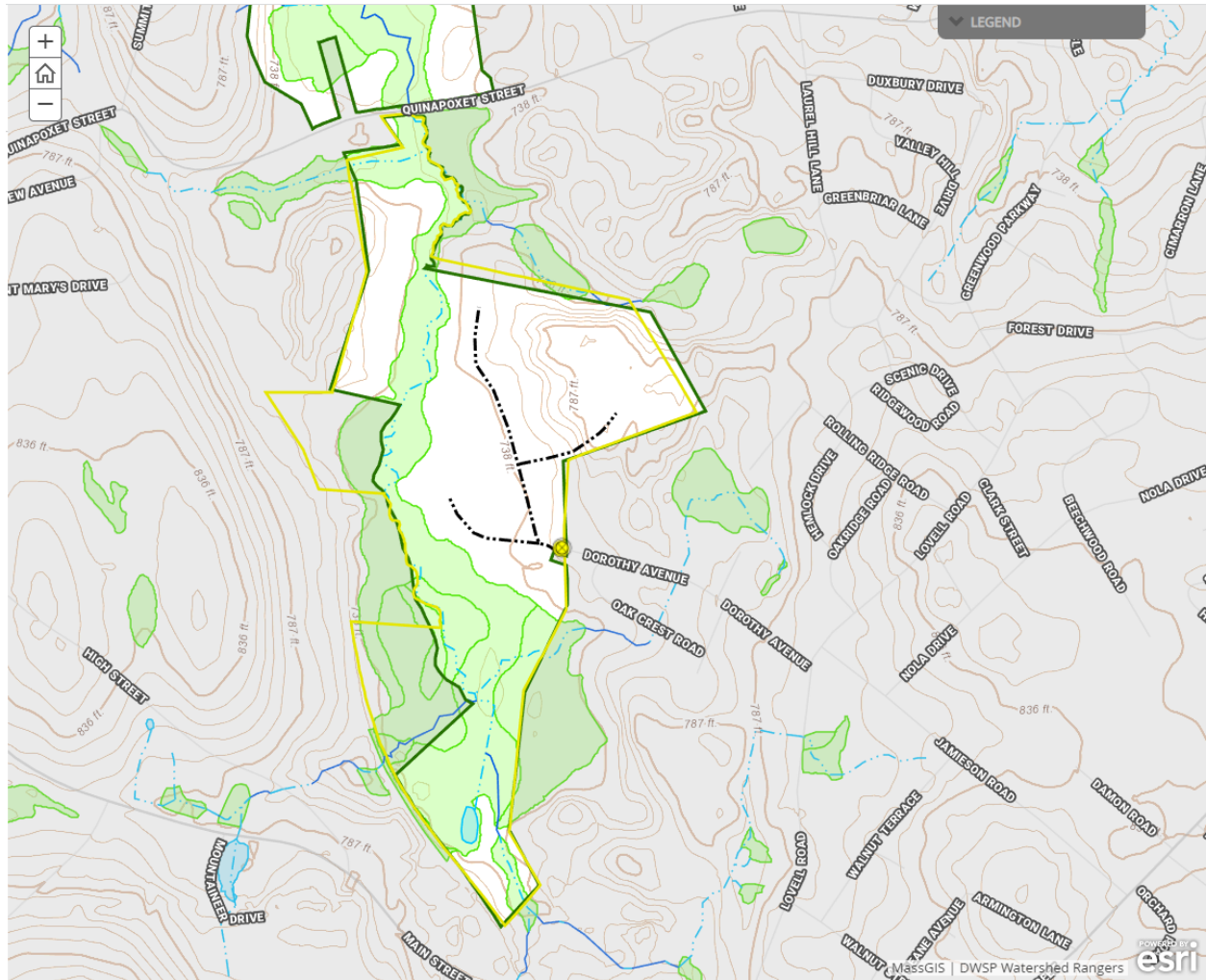


## Environmental Quality Engineering

### Comments on EQ Issues:

A wetland crossing may be considered to access about 5 acres between the old meander channel and the main wetland along Tannery Brook. Evidence suggests this was done long ago when the channel was dry, but significant bridging would be required to do the same now unless the beaver dam breaches and the area drains out. This being unlikely in the short term, the crossing is probably impractical but worth mentioning as a possibility.





## Forest Access Engineering

**Gravel needed:** No

**Landing work needed:** No

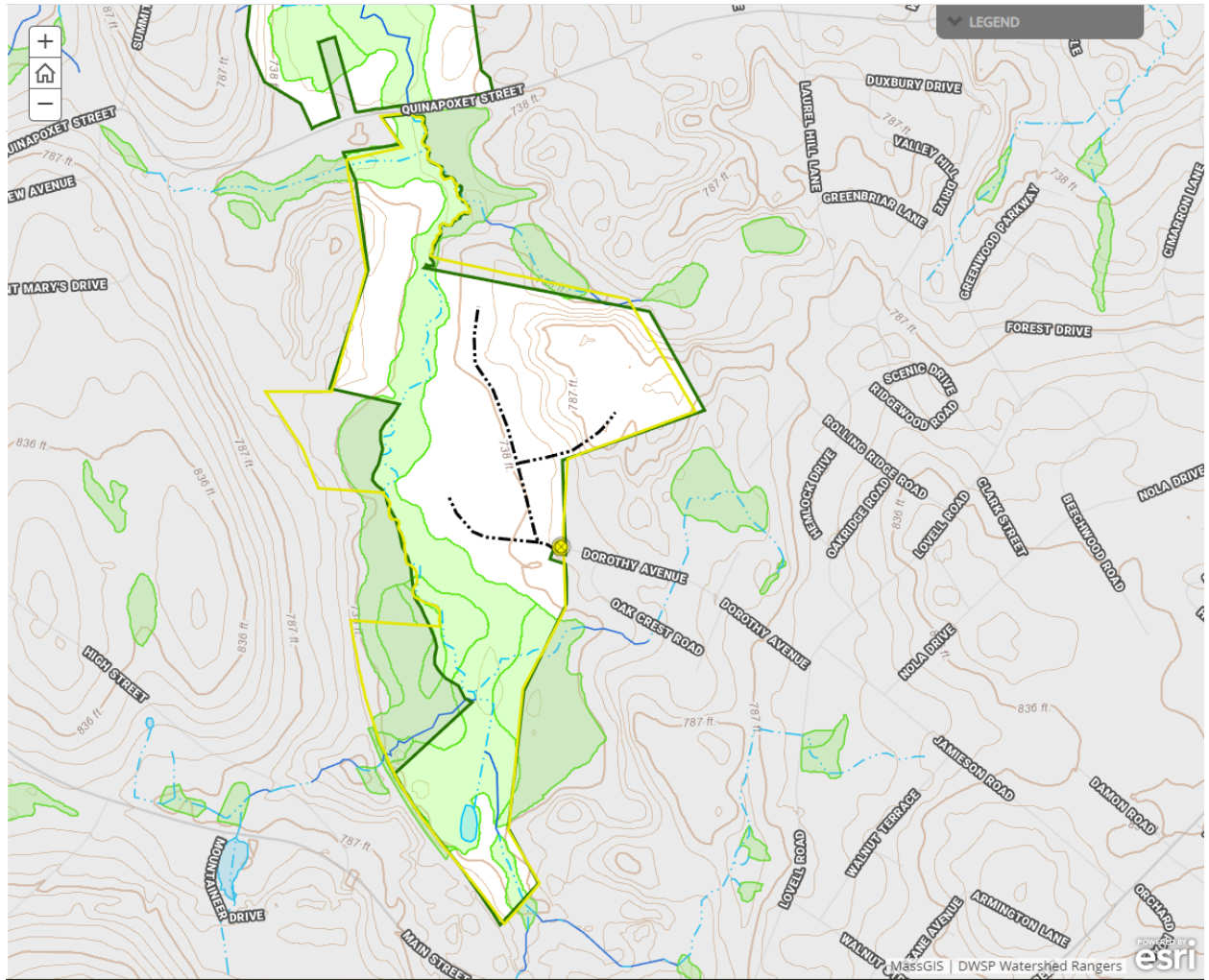
**Culverts needed:** No

**Work needed on permanent bridges:** No
























































































































































**Beaver issue:** No

### **Further comment on access needs:**

No access issues. The landing will be off the end of Dorothy Avenue.



DWSP FY 2022 Forestry Proposals – Master Legend for story maps

<p><b>DWSP Gates</b></p>  <hr/> <p><b>Landings</b></p>  <hr/> <p><b>Crossings</b></p> <p>Xng</p>  Stream Crossing <hr/> <p><b>QWR Culverts</b></p> <p>Purpose</p> <ul style="list-style-type: none"> <li> Stream Crossing B</li> <li> Stream Crossing C</li> <li> Drainage Relief D</li> <li> Unknown</li> </ul> <hr/> <p><b>Quabbin Road Intersections</b></p> 	<p><b>QWWS Watershed Boundaries</b></p> 	<p><b>Forest Cover Type - Filled</b></p> <p>CoverTypeFull</p> <ul style="list-style-type: none"> <li> White Pine-Hardwoods</li> <li> Oak-Hardwoods</li> <li> White Pine-Oak</li> <li> WetHard</li> <li> Mixed Hardwood</li> <li> White Pine</li> <li> Grasses and Forbs</li> <li> White Pine-Hemlock</li> <li> Mixed Oak</li> <li> Northern Red Oak</li> <li> Red Maple</li> <li> Powerline</li> <li> WetMixed</li> <li> Error - Not DWSP</li> <li> Red Pine</li> <li> Shrub Swamp</li> <li> Upland Brush</li> <li> Northern Hardwood</li> <li> Road</li> <li> Beaver Pond</li> <li> Hemlock</li> <li> Hemlock-Hardwoods</li> <li> Mixed-Oak</li> <li> Norway Spruce</li> <li> Pitch Pine</li> <li> WetCon</li> <li> Abandoned Orchard</li> <li> Black Birch-Hardwoods</li> <li> Gravel Pit</li> <li> Northern Hardwoods</li> <li> Pitch Pine-Oak</li> <li> Water</li> <li> Oak, Mixed</li> <li> White pine - oak</li> <li> Mixed hardwoods</li> <li> Hemlock - hardwoods</li> <li> White pine - hardwoods</li> </ul> <hr/> <p><b>Water Bodies - Quabbin</b></p> <p>FType</p> <ul style="list-style-type: none"> <li> Reservoir</li> <li> Lake/Pond</li> <li> Stream/River</li> <li> Swamp/Marsh</li> </ul> <p><b>Streams - Ware River</b></p> <p>FType</p> <ul style="list-style-type: none"> <li> Stream/River</li> <li> Canal/Ditch</li> </ul> <hr/> <p><b>Water Bodies - Ware River</b></p> <p>FType</p> <ul style="list-style-type: none"> <li> Reservoir</li> <li> Lake/Pond</li> <li> Stream/River</li> <li> Swamp/Marsh</li> <li> Other</li> </ul> <p><b>Streams - Wachusett</b></p> <p>EQ_Stream_Type</p> <ul style="list-style-type: none"> <li> Aqueduct</li> <li> Ditch/Canal</li> <li> Intermittent Stream</li> <li> Perennial Stream</li> </ul> <hr/> <p><b>Waterbodies - Wachusett</b></p> <p>EQ_Wetland_Type</p> <ul style="list-style-type: none"> <li> Reservoir</li> <li> Lake, Pond, Wide River, Impoundment</li> <li> Wetland, Marsh, Swamp, Bog</li> </ul> <p><b>NHESP Priority Habitats</b></p> 	<p><b>SubWatersheds (QWWS-filled)</b></p> <p>Subwatershed Name</p> <ul style="list-style-type: none"> <li> ASNEBUMSKIT BROOK</li> <li> Barre Falls</li> <li> Belchertown Shoreline</li> <li> Blackington Swamp</li> <li> Cadwell Creek</li> <li> Cunningham</li> <li> East Br. Fever Brook</li> <li> East Prescott North</li> <li> Fed. Forest Stream</li> <li> Gate 20 Rd. Stream</li> <li> Gate 52 Shoreline</li> <li> Gates Brook</li> <li> Gibbs Brook</li> <li> Josslin</li> <li> Juckett Hill East</li> <li> MIDDLE STILLWATER/ROCKY/WILDER BROOK</li> <li> Mary Tamplin Drainage</li> <li> Middle Br. Swift Lower</li> <li> Moosehorn Brook</li> <li> NORTH STILLWATER/KEYES BROOK</li> <li> Northeast Shoreline</li> <li> Parker</li> <li> Prescott Brook</li> <li> Quabbin Park East</li> <li> RES. SHORELINE EAST</li> <li> Sherer Rd. North</li> <li> TROUT BROOK</li> <li> Thurston Brook</li> <li> Underhill Brook</li> <li> WACHUSETT BROOK</li> <li> Ware</li> <li> West Prescott Middle</li> <li> West Prescott North</li> <li> West Prescott South</li> <li> Whitney Hill Southeast</li> <li> Whitney Hill West</li> <li> Other</li> </ul> <hr/> <p><b>Subwatersheds (WA-outline)</b></p> 	<p><b>Forestry Proposal Boundaries</b></p> 	<p><b>Towns</b></p> 	<p><b>Water Supply Property Boundary</b></p> 	<p><b>Proposed Skid Trails</b></p> 	<p><b>Stone Walls - WA</b></p> 	<p><b>StoneWalls - QWR</b></p> 	<p><b>Stony Soils</b></p> <p>Stoniness</p> <ul style="list-style-type: none"> <li> extremely stony</li> <li> very stony</li> </ul> <hr/> <p><b>Soils - Drainage</b></p> <p>Drainage Class</p> <ul style="list-style-type: none"> <li> Excessively Drained</li> <li> Well Drained Thick</li> <li> Well Drained Thin</li> <li> Moderately Well Drained</li> <li> Poorly To Very Poorly Drained</li> </ul>
<p><b>DCR/DWSP Trail/Road Data (Public View)</b></p> <p>Type</p> <ul style="list-style-type: none"> <li> Public Road</li> <li> Administrative Road</li> <li> Forest Road/Trail</li> <li> Trail</li> <li> Other</li> </ul>										
<p><b>DCR-DWSP Trails and Roads</b></p> <p>Type</p> <ul style="list-style-type: none"> <li> Administrative Road</li> <li> Forest Road/Trail</li> <li> Other</li> <li> Public Road</li> <li> Trail</li> </ul>				<p><b>Quabbin and Ware River Cultural Resources Inventory (Public view)</b></p> <p>Type</p> <ul style="list-style-type: none"> <li> No Value/Blank</li> <li> Agrarian</li> <li> Cellar Hole</li> <li> Civic</li> <li> Commercial</li> <li> Industrial</li> <li> Military</li> <li> Other</li> <li> Residential</li> <li> Shed</li> <li> Unknown</li> </ul>						
<p><b>Wachusett/Sudbury Road Infrastructure</b></p> <p>Infrastructure_Type</p> <ul style="list-style-type: none"> <li> Bridge</li> <li> Broad Based Dip</li> <li> Checkdam</li> <li> Culvert</li> <li> Ditch</li> <li> Ford</li> <li> Waterbar</li> <li> Other</li> </ul>										
<p><b>Wachusett Internal Roads</b></p> <p>Priority:</p> <ul style="list-style-type: none"> <li> Access Road, unmaintained</li> <li> Access Road</li> </ul>	<p><b>NHESP Certified Vernal Pools</b></p> <p>NHESP Certified Vernal Pools</p> 	<p><b>Forest Cover Type - Outline</b></p> 	<p><b>Subwatersheds (QWR-outline)</b></p> 	<p><b>QWWS Percent Slope</b></p> <ul style="list-style-type: none"> <li> 0 - 7</li> <li>&gt; 7" data-bbox="740 815 755 830"/&gt; &gt; 7</li> </ul>						