

# **Ware River Harvest Proposal WR-22-42-5**

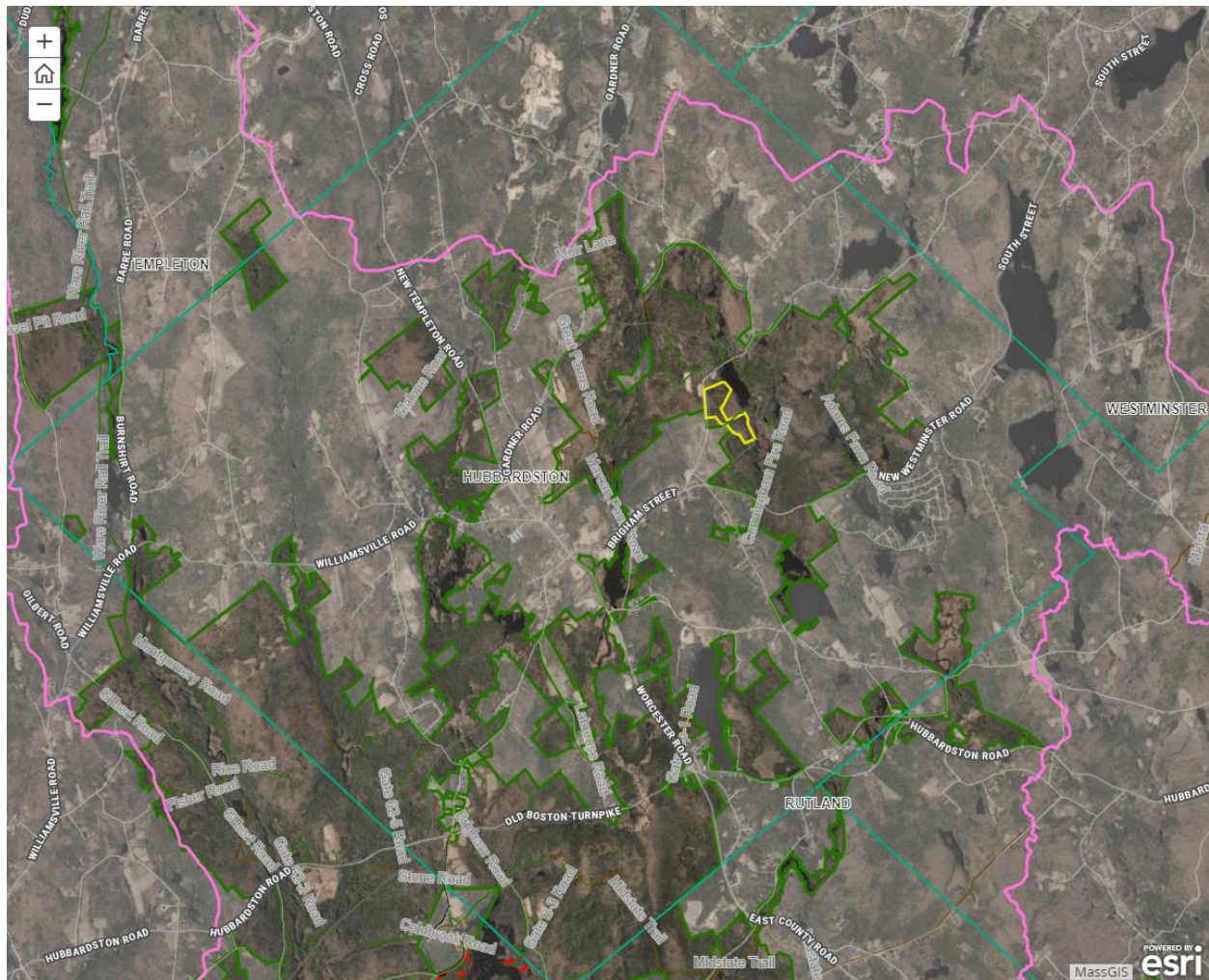
## **Proposal Goals**

The goal for this proposal is to make the forest more diverse and resilient. It will reduce the amount of mature, old field white pine and replace it with patches of young forest of diverse species.

## **Proposal Location**

This proposal is located in the town of Hubbardston. It is east of Old Westminster Road and west of Cunningham Pond.

**Total Acres: 52**



## General Description

	Overstory Type(s)	Acres
<b>Dominant</b>	White pine - hardwoods	37
<b>Secondary</b>	Oak - hardwoods	14

## Secondary

	Understory Type(s)
<b>Dominant</b>	Tree seedlings/saplings dominate site

Secondary	
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**Description of forest composition/condition:**

Harvest lot 249 was a 10 acre group shelterwood harvest in the northern section of the lot that was completed in 1997. The 1938 aerial photos show that the central part of the lot, along Old Westminster Road was open field at that time. The northern and southern section appear to be young forest/reverted field at that time.

White pine/hardwood - There are three distinct white pine hardwood stands on this lot. The first is approximately 16 acres in the northern portion of the lot. A group shelterwood completed in 1997 has left openings that are well stocked with a good mix of hardwood poles interspersed with areas of mature, sawlog size, low quality white pine. In the patches of overstory white pine, there is approximately 150 square feet of basal area per acre, only 30 square feet of which is in acceptable growing stock. Red maple, black cherry, and red oak stems are also present in the overstory. Regeneration is abundant and is comprised of pole red oak, red maple, American beech, black cherry, and black birch.

The second distinct stand is a 8 acre stand of low quality, old field white pine and hardwood in the central part of the lot, east of a pole hardwood stand adjacent to Old Westminster Road. This stand is an even age stand that is dominated by small sawlog size, low quality white pine that is approximately 50 to 60 feet tall. Red maple, red oak, black cherry, white ash, and white birch are also found in the overstory. Some of the red oak is good quality. The quality of the other hardwoods is poor. There is approximately 155 square feet of basal area per acre with only 18 square feet in acceptable growing stock. Regeneration is abundant in parts of the stand and absent in other areas where the overstory is thicker. Regeneration consists of red maple, red oak, black cherry, white ash, eastern hemlock, American beech, black, yellow, and white birch, aspen, and sugar maple.

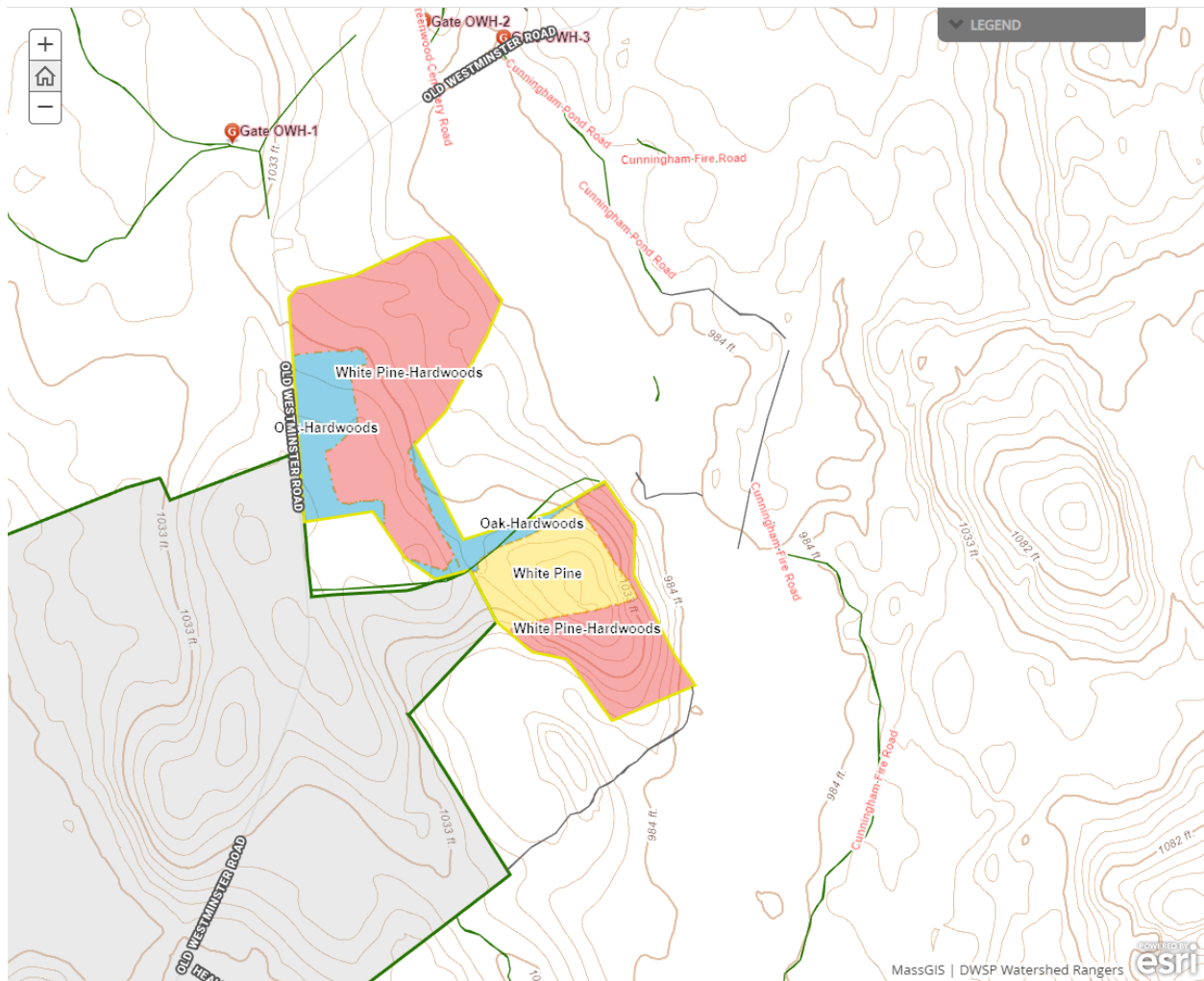
The third white pine/hardwood stand is a 13 acre stand in the southeast portion of the lot. This stand is dominated by mature, sawlog size white pine. Red maple, black cherry, red and black oak, and Norway spruce are also found in the overstory. The northern section of the stand is heavier to white pine and is better quality, although some red rot was observed. Many of the white pine crowns look very thin and mortality is present. The southern end of the stand is lower quality and more diverse with a small section with some planted spruce and a strip of hardwood that has overstory white ash, sugar maple, and paper birch. There is approximately 150 square feet of basal area per acre with 30 square feet in acceptable growing stock. Regeneration consists of white pine and eastern hemlock poles, as well as red maple, red oak, American beech, sugar

maple, and Norway spruce seedlings. Mountain laurel is present but light in the southwestern portion of the stand.

Oak/hardwood - There are three distinct oak/hardwood stands on this lot. The first is a 6 acre stand in the old field section adjacent to Old Westminster Road. Good quality red and black oak poles dominate this stand, with red maple, aspen, black cherry, and white ash poles also present. No silvicultural treatments will be proposed for this stand, other than the landing will need to be located adjacent to Old Westminster Road. There is also an oak hardwood stand located east of the central portion of this lot. A small portion of that stand will need to be crossed near the property boundary in order to access the southern portion of this lot. The third oak hardwood stand is approximately 6 acres located in the southwest corner of the lot. This stand is dominated by mature, sawlog size red and black oak. Red maple, black cherry, low quality white pine, and white birch are also present in the overstory. The stand is well stocked with approximately 120 square feet of basal area per acre in the overstory. The overall oak quality is poor to medium with only 40 square feet of basal area per acre in acceptable growing stock. The stand is even aged with no evidence of recent harvests. Regeneration is abundant with white pine, eastern hemlock, American beech, and red maple seedlings. Mountain laurel is present and is thicker adjacent to the stream to the west of the stand.

#### **Assessment of Terrestrial Invasive Species:**

Glossy buckthorn was observed on the lot.



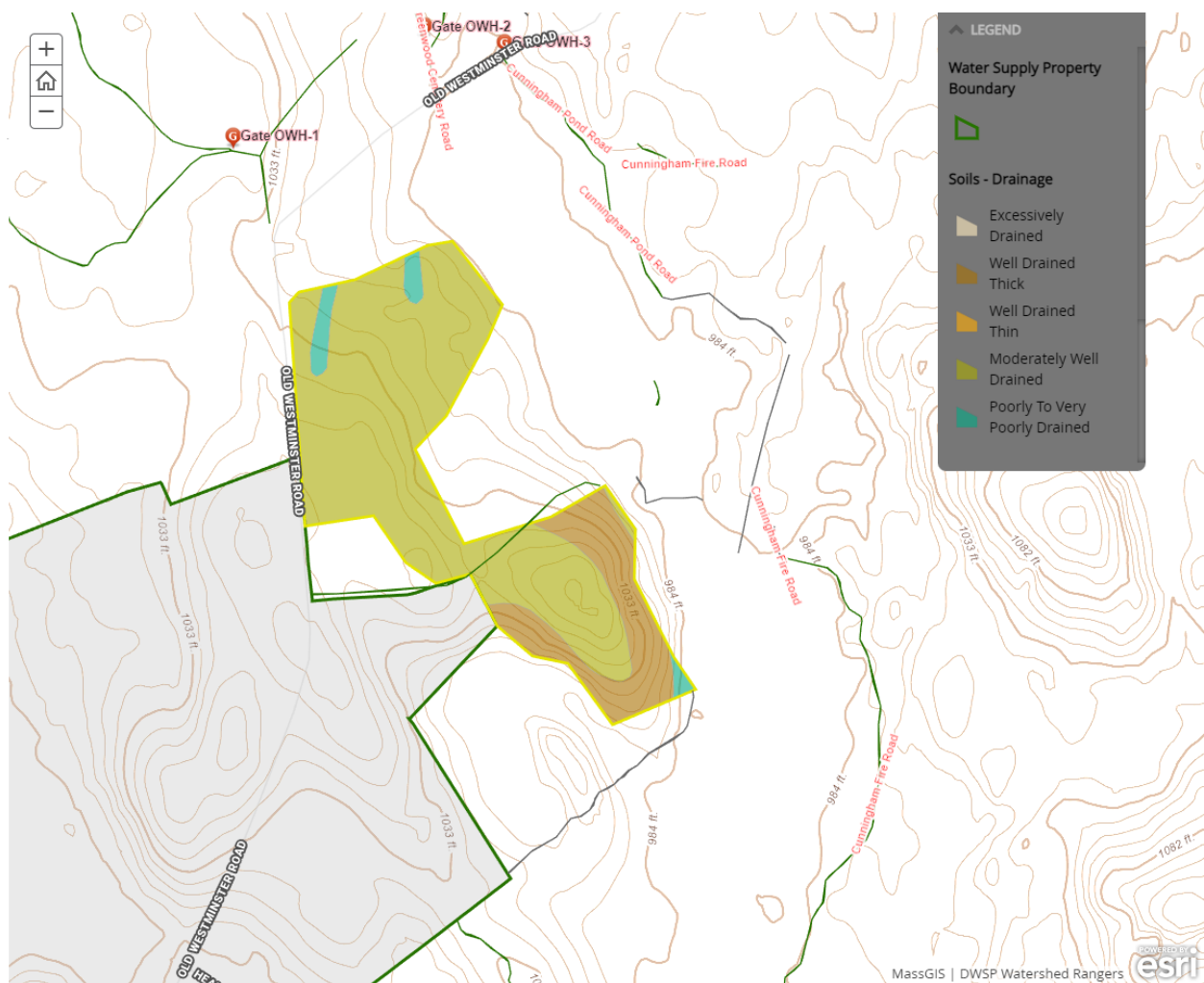
## Soils

Drainage Class	%
Excessively Drained	0
Well Drained Thin	0
Well Drained Thick	20
Moderately Well Drained	77
Poorly to Very Poorly Drained	3

905C - Peru-Marlow association, 3 to 15 percent slopes, extremely stony, moderately well drained - 40.1 acres

901E - Berkshire-Marlow association, 15 to 45 percent slopes, extremely stony, well drained thick - 9.7 acres

918B - Ridgebury-Whitman association, 0 to 8 percent slopes, extremely stony, poorly to very poorly drained - 1.5 acres



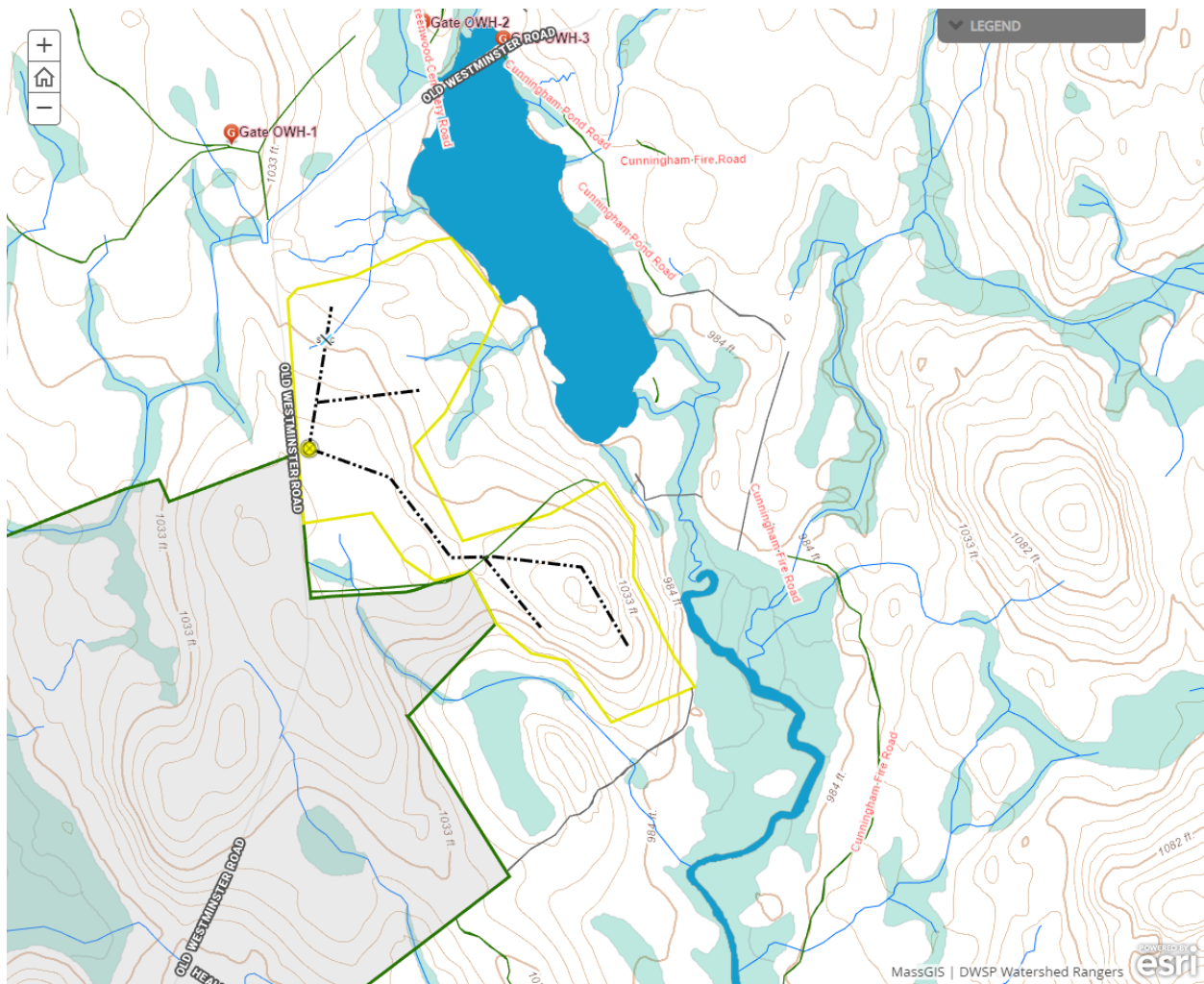
## Wetlands

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



- Vernal pools present? - **Yes**
- Seeps present? - **None known**
- Are stream crossings required? - **Yes**
- Are wetland crossings required? - **No**
- Is logging in filter strips planned? - **Yes**
- Is logging in wetlands planned? - **No**

Tiny, intermittent channel in the northern section will require crossing.



## Silviculture

Acres in Intermediate cuts: **0**

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

Acres in Regeneration cuts: **22**

Average regen opening size: **3**

Maximum regen opening size: **5**

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

Regeneration is generally abundant through out the lot. The regeneration is pole size in the northern section of the lot where the group selection harvest was conducted and is dominated by red oak poles. The regeneration in the rest of the stand is mostly seedling/sapling size and is comprised of red oak, red maple, white pine, eastern hemlock, American beech, black cherry, white ash, sugar maple, aspen, Norway spruce, and black, yellow and white birch.

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

White pine/hardwood - In the northern stand where the previous group selection harvest was completed, an additional 1 or 2 groups of 1 to 2 acres should be established with the goal of expanding the existing groups and releasing the pole oak regeneration. This section appears to be a bit wet, which will also dictate where new groups can be established. A stream is mapped in this area, though it appeared not to be mapped correctly. In the low quality old field pine stand in the central part of the lot one opening of 5 acres and one opening of up to 2 acres will be established. In the 13 acre stand in the southern portion of the lot one opening of up to 5 acres and 1 or 2 openings of up to 2 acres will be established, targeting the lowest quality, least vigorous white pine stems. At least 5 square feet of basal area per acre of the best formed, most vigorous stems of all species will be retained in all groups.

Oak/hardwood - No silvicultural treatments will be proposed for the 6 acre stand adjacent to Old Westminster Road, other than the landing will need to be located in the stand. No silvicultural treatments are proposed for the small portion of the oak hardwood stand in the eastern central part of the lot, other than a skid trail to access the southern portion of the lot. In the 6 acre stand in the southern portion of the lot, 1 group of up to 2 acres will be established targeting the poorest quality oak stems.



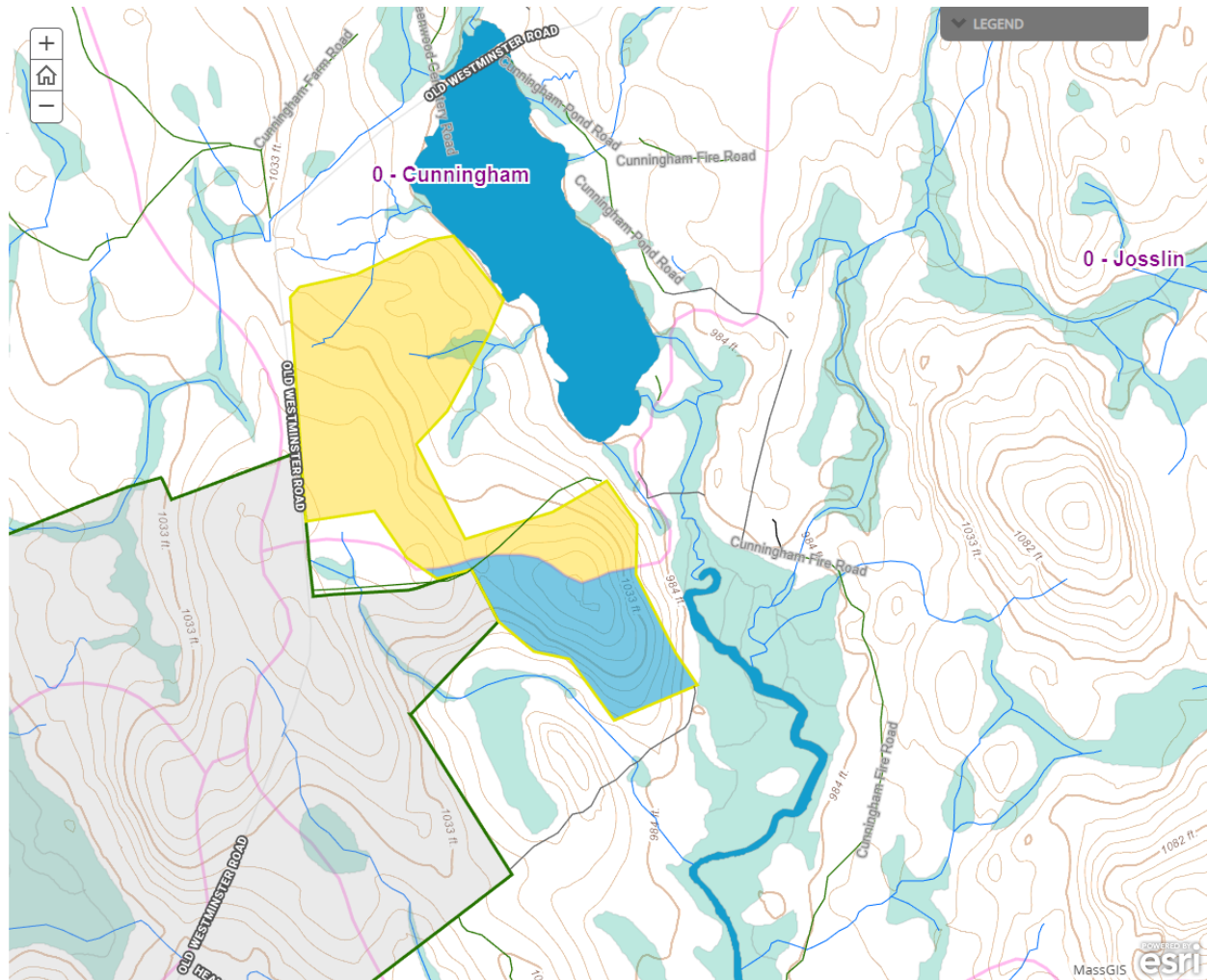


## Subwatershed Analysis

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
8025 (Cunningham Pond)	827	0	207	38
8027 (Josslin Brook)	1162	0	291	14

8025 - Cunningham - No other proposals.

8027 - Josslin - There are 48 acres in proposal WR-21-21-3 in this subwatershed



## Harvesting Limitations

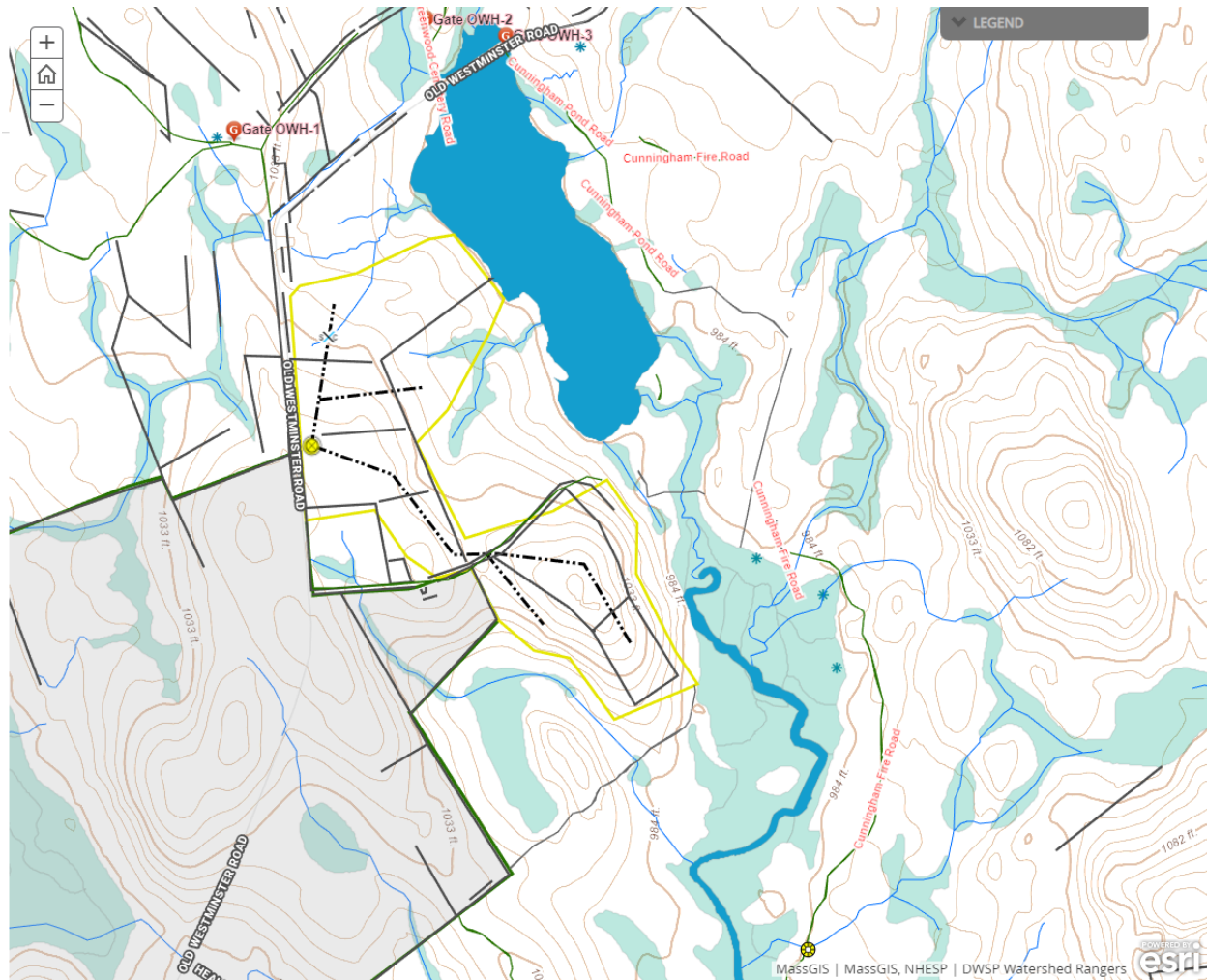
Forwarder required: **No**

Feller/processor required: **No**

Steep slopes present: **No**

**Comments on harvesting limitations:**

No specific equipment requirements.

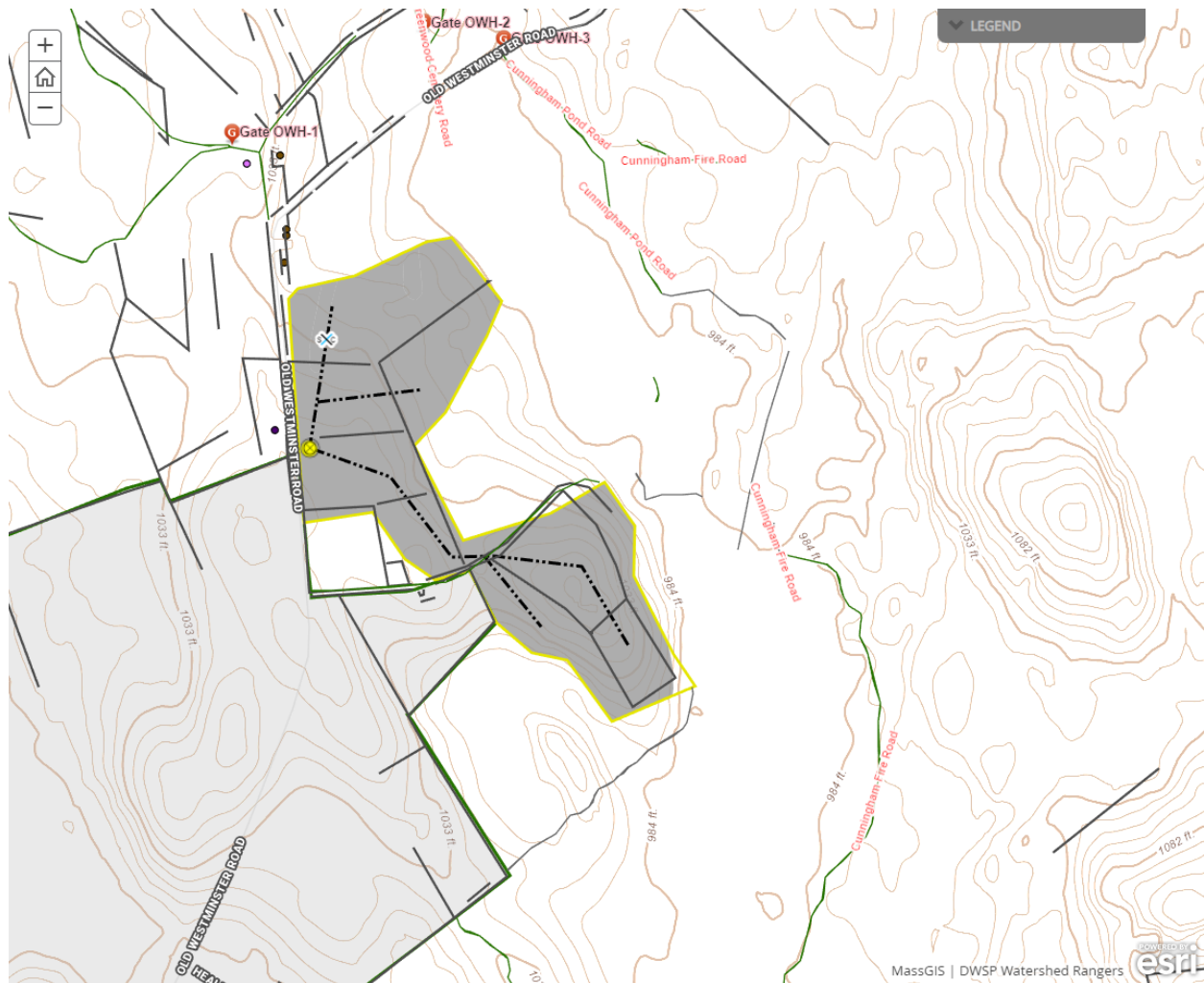


## Cultural Resources

### Comments on Cultural Resources:

A cellar hole is located along the old road that hits Old Westminster Road at the southern property boundary. It will be well buffered. There are stone walls present throughout the lot that will have to be crossed to access the lot.





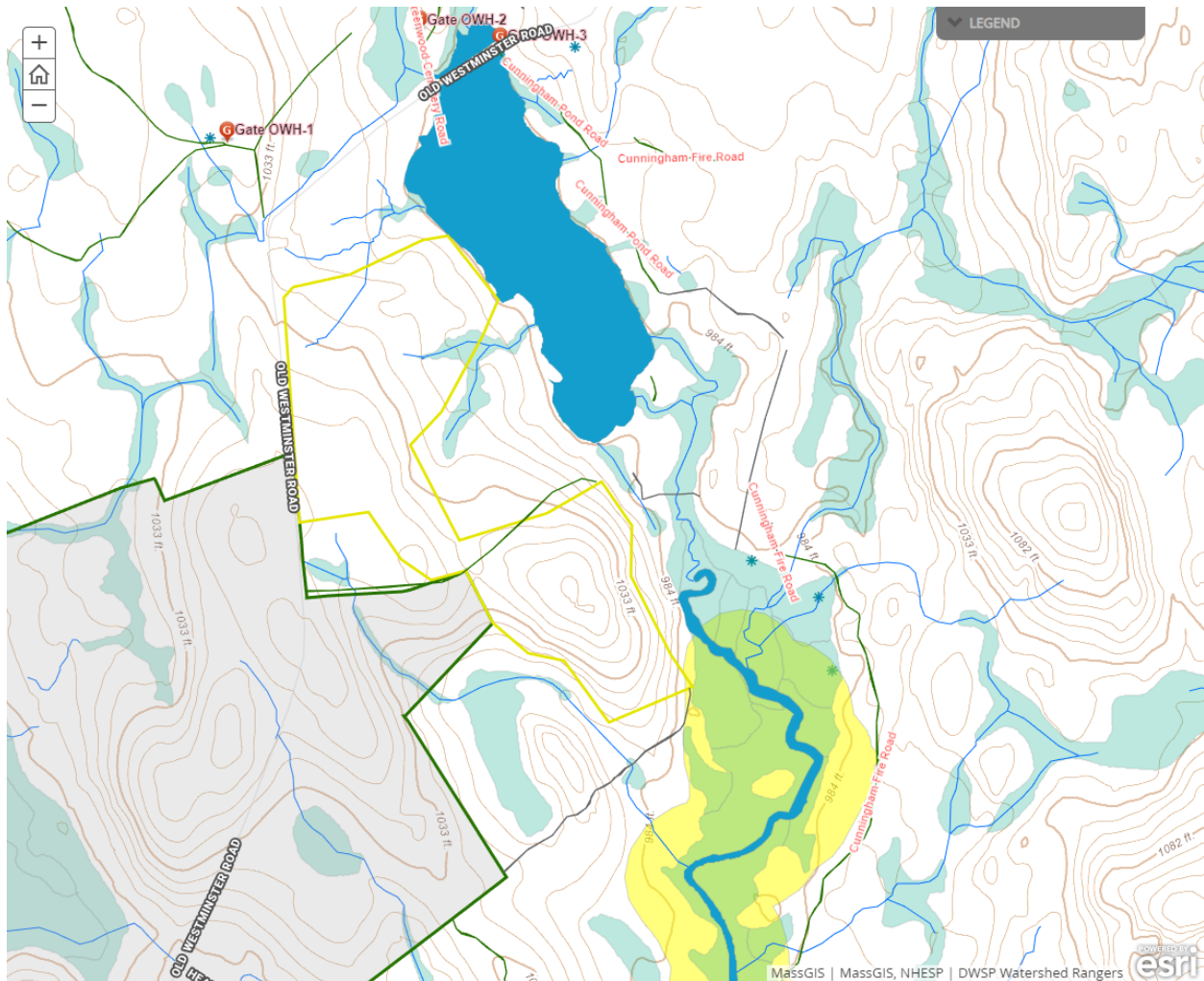
## Wildlife Resources & Rare and Endangered Species

### General Wildlife Comments:

Moose/deer browse was heavy in the southern white pine stand.

### Comments on Rare Species/Habitats:

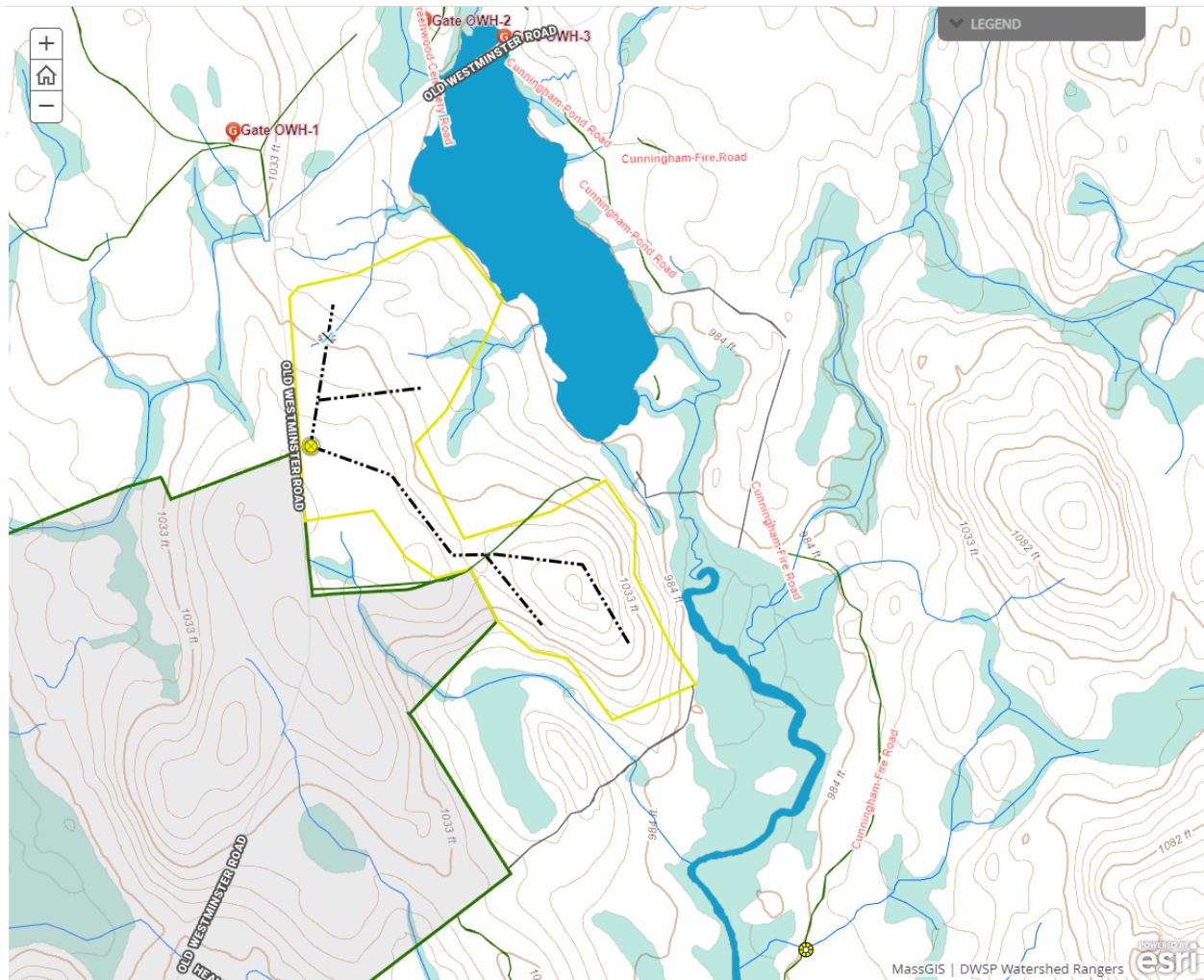
The very southeastern tip of the lot touched a NHESP bubble along Josslin Brook. No harvesting expected within this area.



## Environmental Quality Engineering

### Comments on EQ Issues:

No crossings are planned that would require EQ monitoring. The one stream crossing is over a very small intermittent that will likely be dry most of the year, but will be protected appropriately if flowing while the lot is harvested.



## Forest Access Engineering

**Gravel needed:** No

**Landing work needed:** No

**Culverts needed:** No

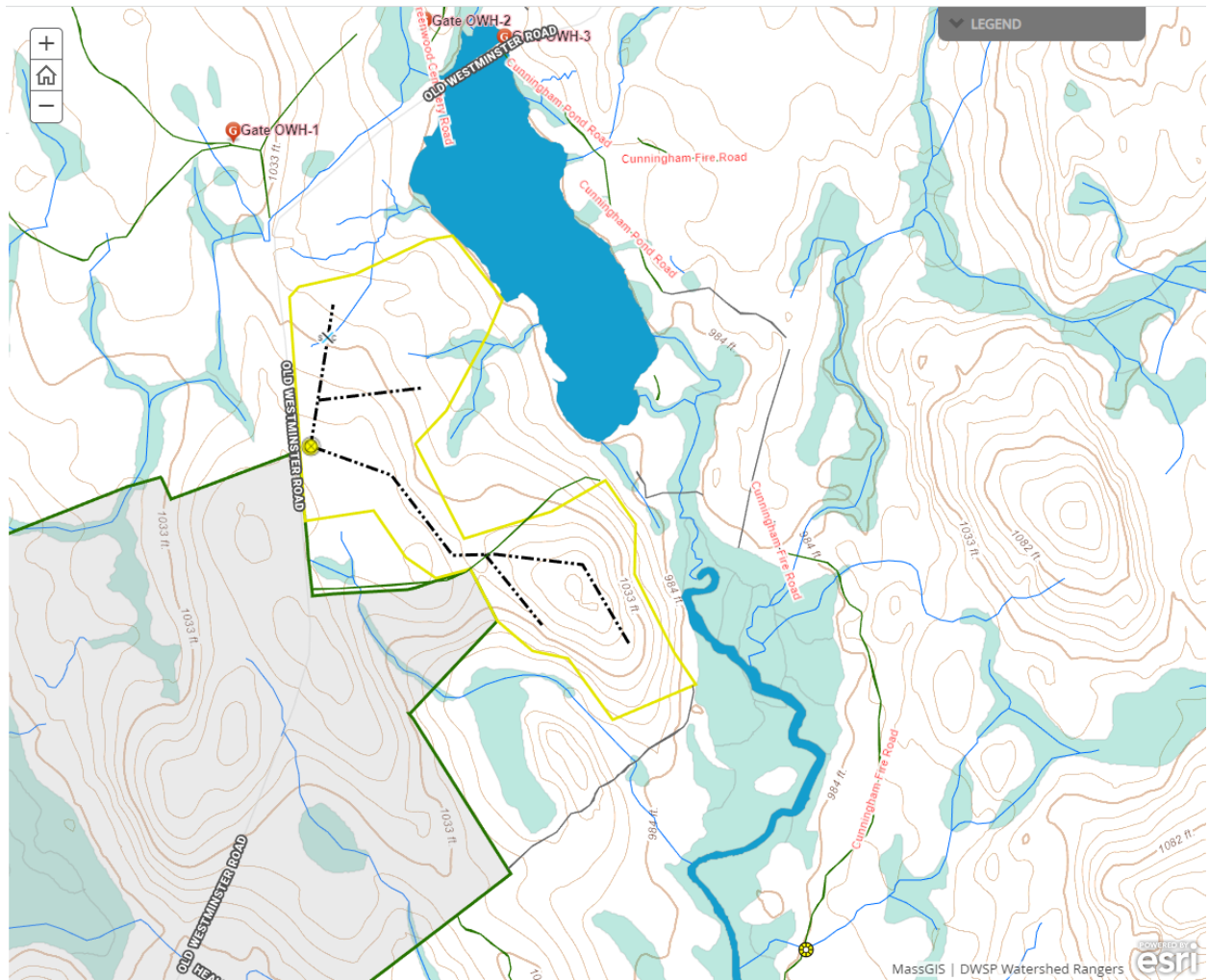
**Work needed on permanent bridges:** No

**Beaver issue:** No

**Further comment on access needs:**

No work should be necessary for access.





## DWSP FY 2022 Forestry Proposals – Master Legend for story maps

