Wachusett Harvest Proposal WA-23-317

Proposal Update, May 2024:

This forestry proposal was originally approved through the public process in 2022. 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 2022 in ArcGIS Online Story Map format.

Proposal Goals

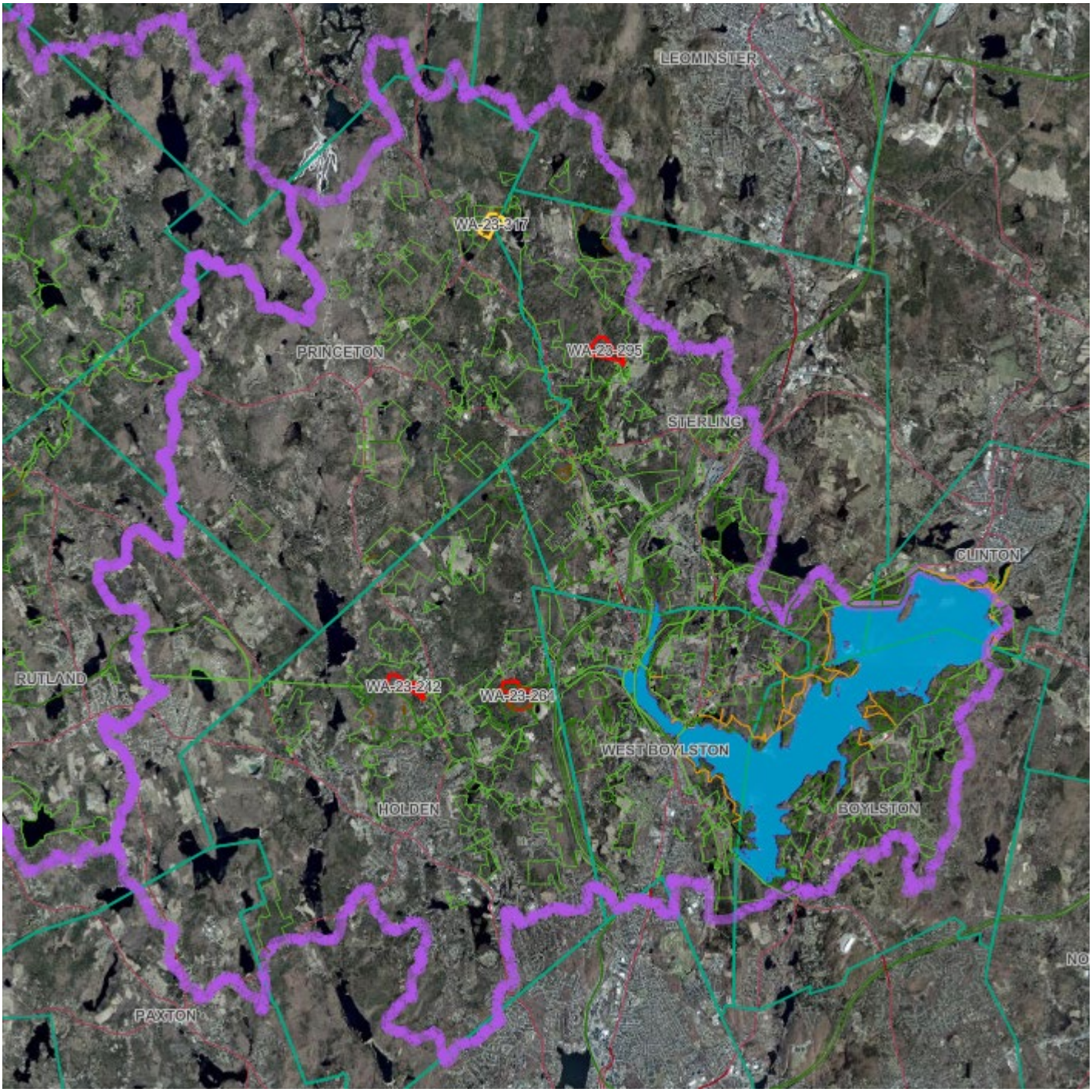
The primary goal will be managing the mountain laurel currently preventing regeneration from establishing through a prep cut. The secondary goal will be releasing advanced regeneration in the few areas where advance regeneration is sufficient.

Proposal Location

(Yellow highlighted polygon in the map) Beginning at the eastern most portion of the working unit near Stuart Pond. Heading southwesterly for about 280' where the unit turns more westerly for about 550'. Thence turning southerly for approximately 1250' where the unit turns west abruptly for 970'. The unit boundary then meets a bouldered slope and runs along the slope in a northerly fashion for about 1700'. The unit then turns easterly for about 1500' to the point of beginning.

Total Acres: 44

Figure 1. Watershed Locus, WA-23-317.



General Description

Overstory Type(s)	Acres
White pine - oak	19
Mixed oak	9
White pine - hardwoods	6

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

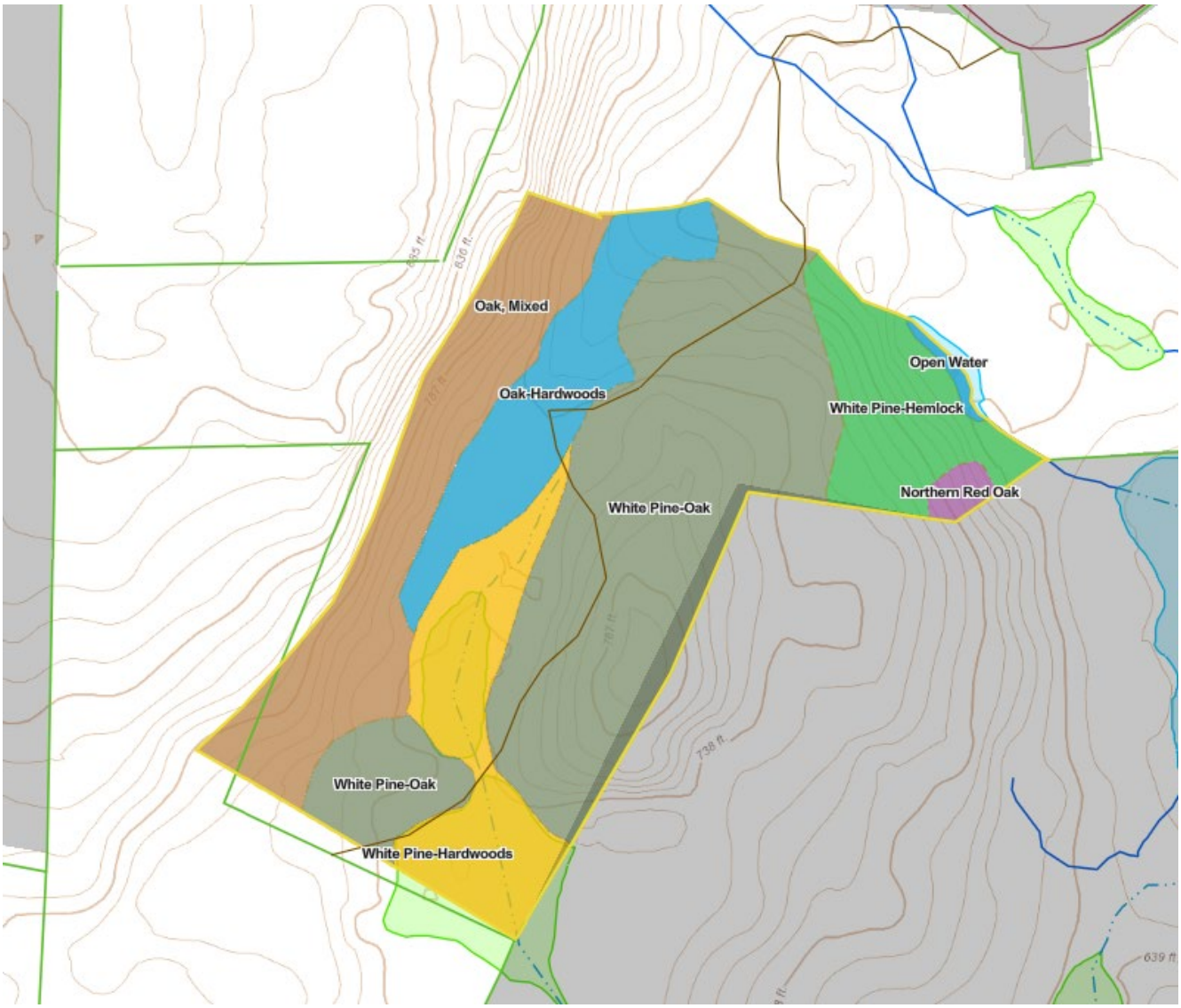
Description of forest composition/condition:

This forest is characterized by its large bouldered slope to the West, the ridgeline to the East and the mountain laurel in between. There was a harvest on this working unit before it was purchased by DWSP. The harvest was a light thinning that resulted in mountain laurel taking over with exception to some small pockets where mostly black birch or white pine regeneration made it above the mountain laurel. The forest is dominated by mostly red oak, white pine and hemlock with lesser amounts of red maple, black birch, American beech, yellow birch, paper birch and white ash. The age structure of this working unit is entirely over 100 years old.

Assessment of Terrestrial Invasive Species:

Invasive sampling found no invasives in any of the 86 plots taken.

Figure 2. Forest cover types, WA-23-317.

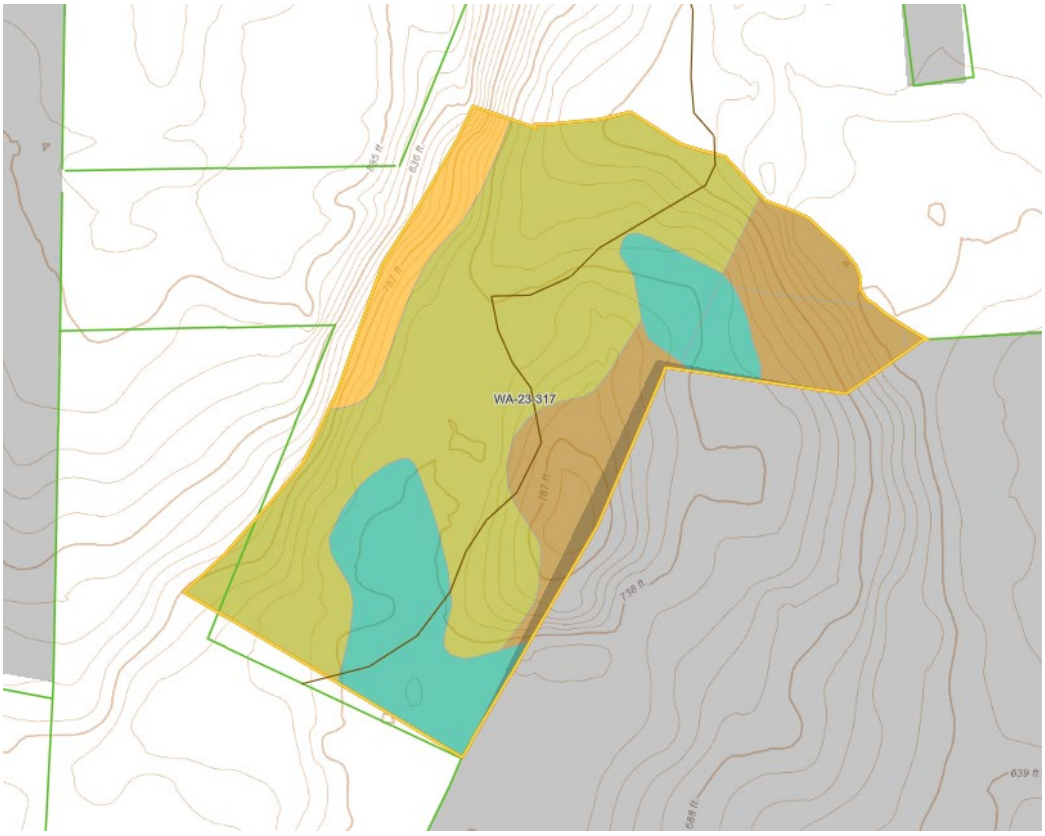

Oak, Mixed
Oak-Hardwoods
Open Water
White Pine-Hemlock
Northern Red Oak
White Pine-Oak
White Pine-Oak
White Pine-Hardwoods
738 ft
639 ft

Soils

Drainage Class	%
Excessively Drained	0
Well Drained Thin	16
Well Drained Thick	65
Moderately Well Drained	0
Poorly to Very Poorly Drained	20

Well drained thick Montauk-Scituate-Canton soils make up more than half of the working unit, with Paxton and Canton soils making a small percentage. Well drained thin Charlton, Paxton and Charlton-Chatfield-Hollis make up the soils covering the bouldered slopes and ridge portions of the unit. The poorly drained Ridgebury-Whitman and Ridgebury soils are found in the wetlands of the working unit.

Figure 3. Soil classes, WA-23-317.

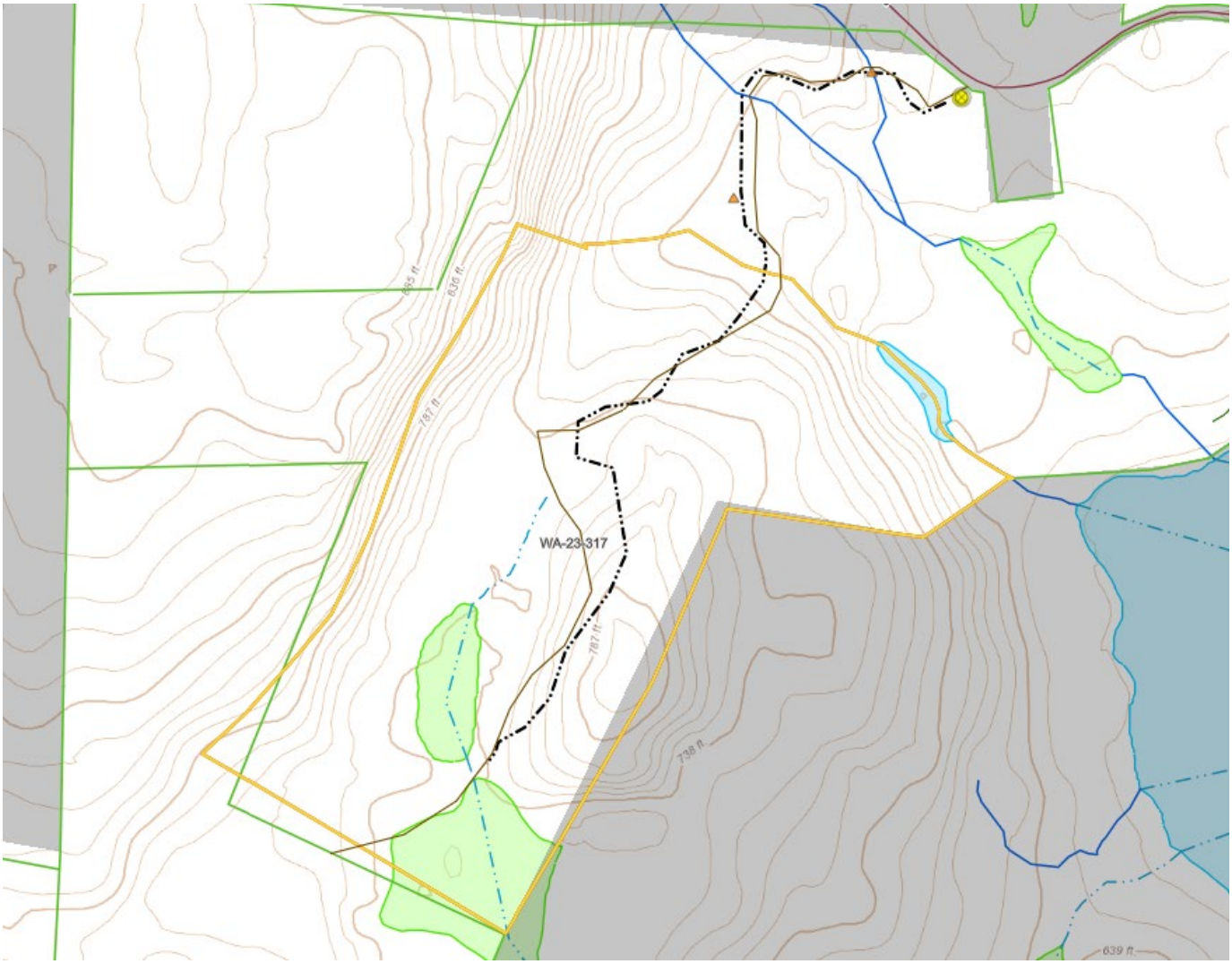


Wetlands

- Wetlands present? - **Yes**
- Streams present? - **Yes**
- Vernal pools present? - **No**
- Seeps present? - **No**
- 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**

The stream crossings are located outside of this working unit to the North. They are pre-existing crossings and were utilized in a 2009 harvest. BMP's will be utilized to protect them during harvest.

Figure 4. Wetland resources, WA-23-317.



Silviculture

Acres in Intermediate cuts: **0**
Acres in prep/establishment cuts: 1**5**
Acres in Regeneration cuts: **5**
Average regen opening size: **1**
Maximum regen opening size: **2**

Description of advance regeneration in proposal area:

Regeneration sampling found 37% of the 86 plots taken were interferred by mountain laurel. Another 29% of all plots found no regeneration. Only 15% of all plots were regenerated or had marginal regeneration. Species observed include white pine, black birch, hemlock, sassafras and striped maple. Oak regeneration was only found on 7% of the plots taken.

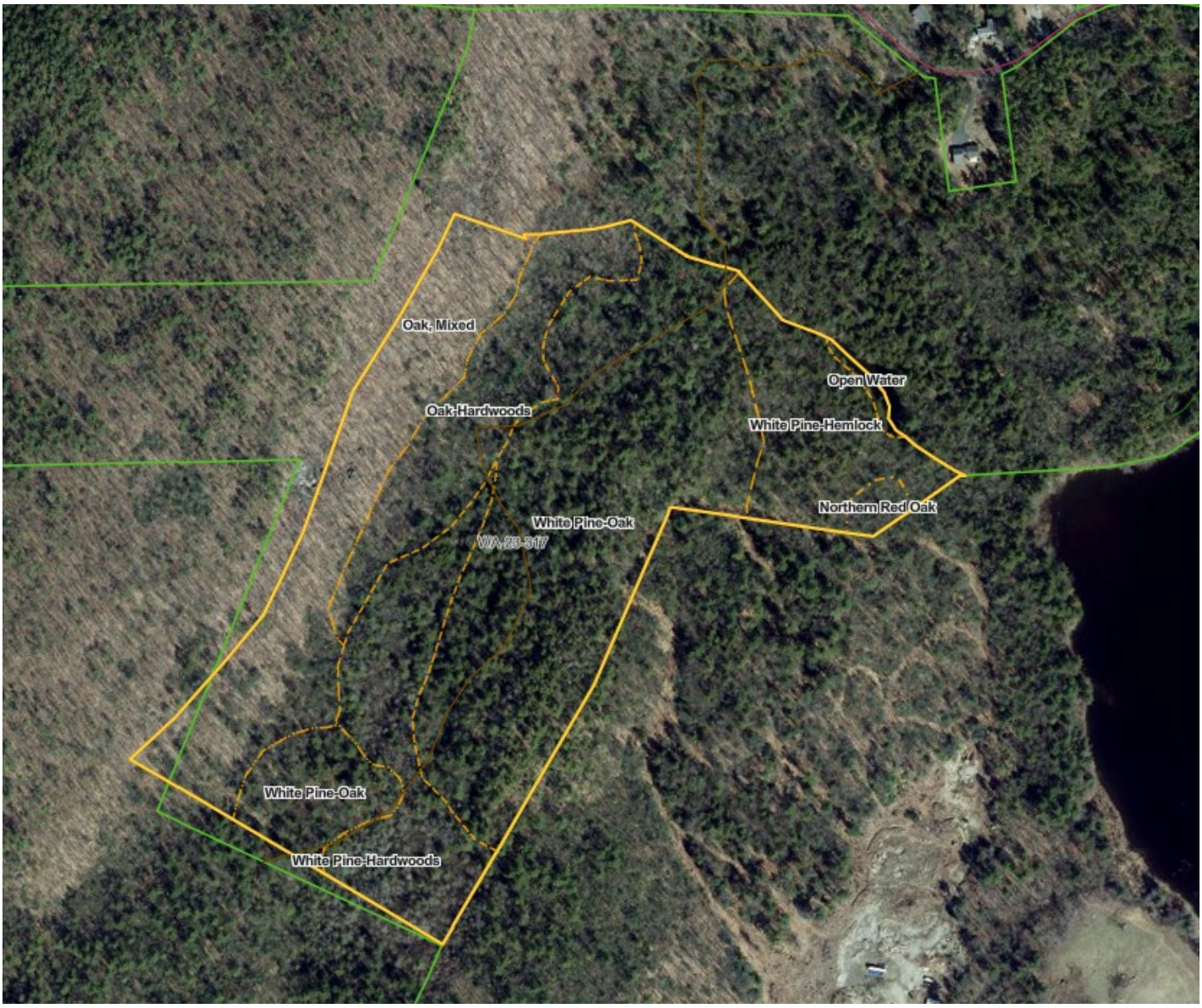
General comments on silviculture proposed:

Due to the amount of mountain laurel interferring in this working unit, a prep cut will take place on about 15 acres. The goal of the prep cut will be to thin the overstory, crush and cut the mountain laurel, all while exposing the soil. This scenario will create the amount of sunlight and exposed soil to allow for tree seedlings to come in. The harvest that occurred prior to this property's acquisition was a thinning that didn't allow enough sunlight or soil disturbance for seedlings to take hold. Thus creating a situation where mountain laurel is interfering with tree seedlings. Up to an additional five acres in regeneration openings will occur only in areas where regeneration is suitable for release.

Climate Change considerations:

Typical silviculture in this proposal designed to sustain fundamental ecological processes, reduce the risks of impacts from severe disturbances, and enhance species and structural/habitat diversity. Reduction of mountain laurel cover to convert to tree regeneration should help reduce wildfire fuel loading as well.

Figure 5. Orthophoto and cover types, WA-23-317.

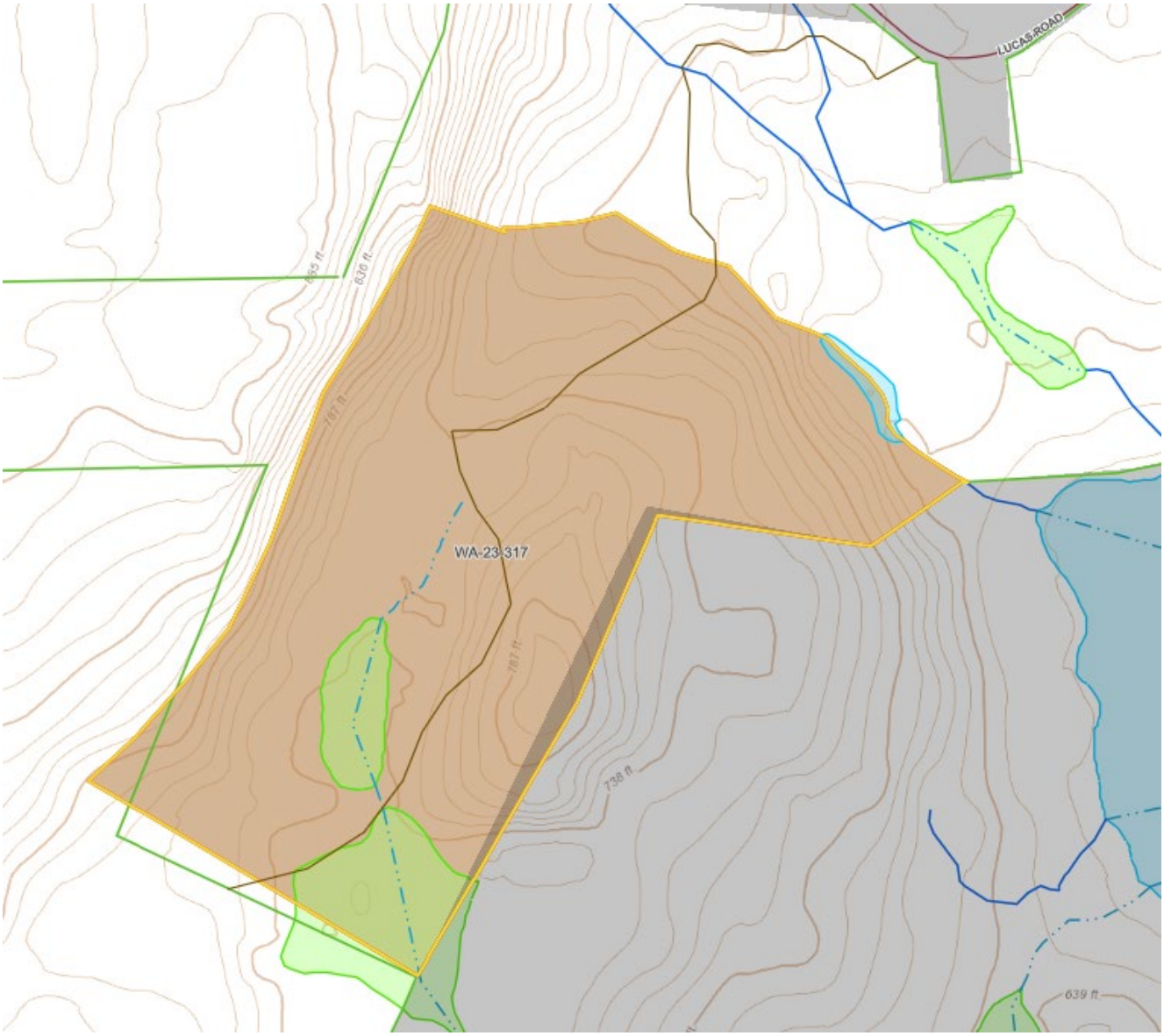


Subwatershed Analysis

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)	1046	83	178	44

The proposed harvest removals will not exceed the 25%/10-year threshold in this subwatershed.

Figure 6. Subwatersheds, WA-23-317.



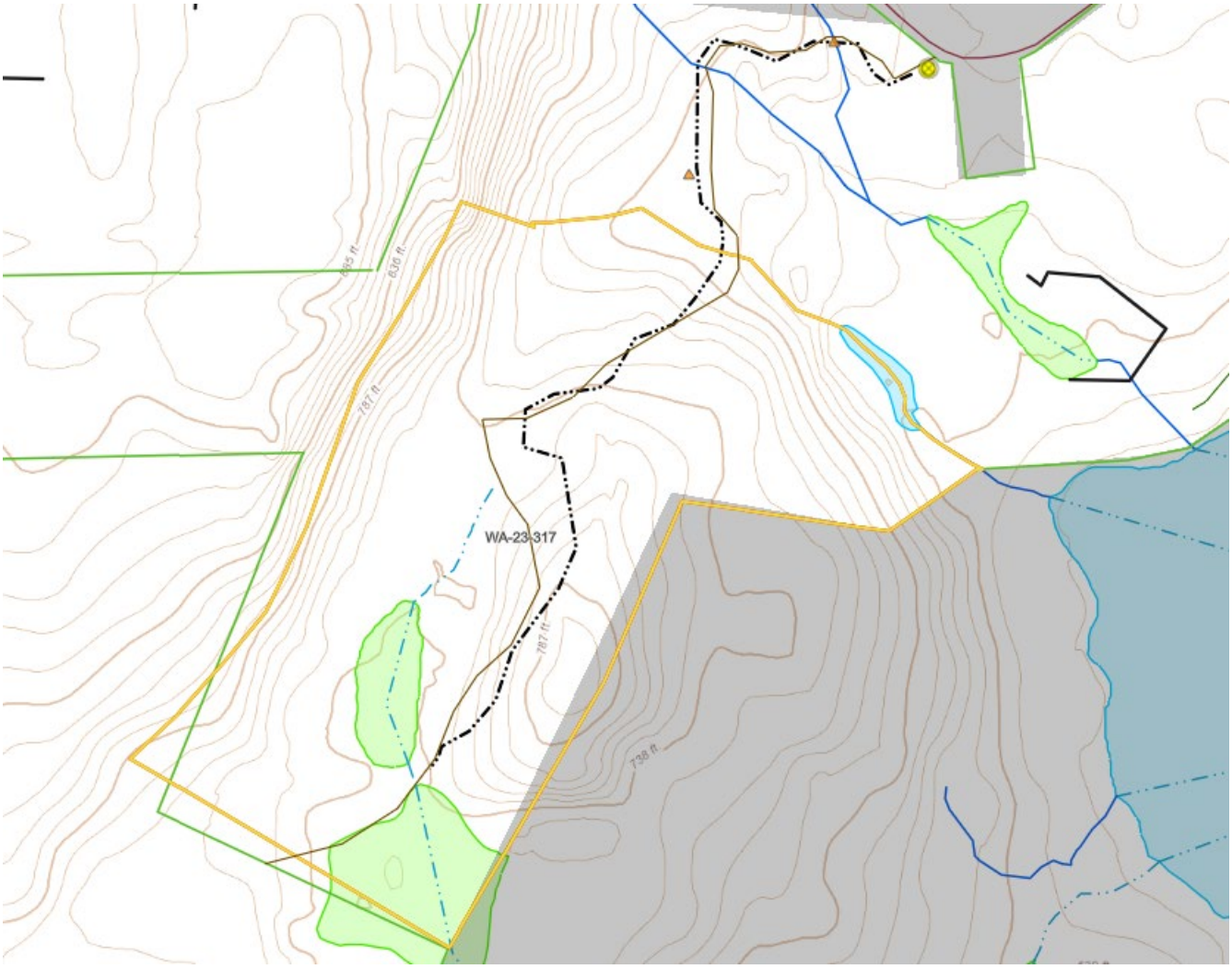
Equipment

Forwarder required: **Yes**
Feller/processor required: **Yes**
Steep slopes present: **No**

Comments on harvesting limitations:

To aid in protecting retained trees and advance regeneration, a forwarder and processor will be utilized.

Figure 7. Harvesting limitations, WA-23-317.

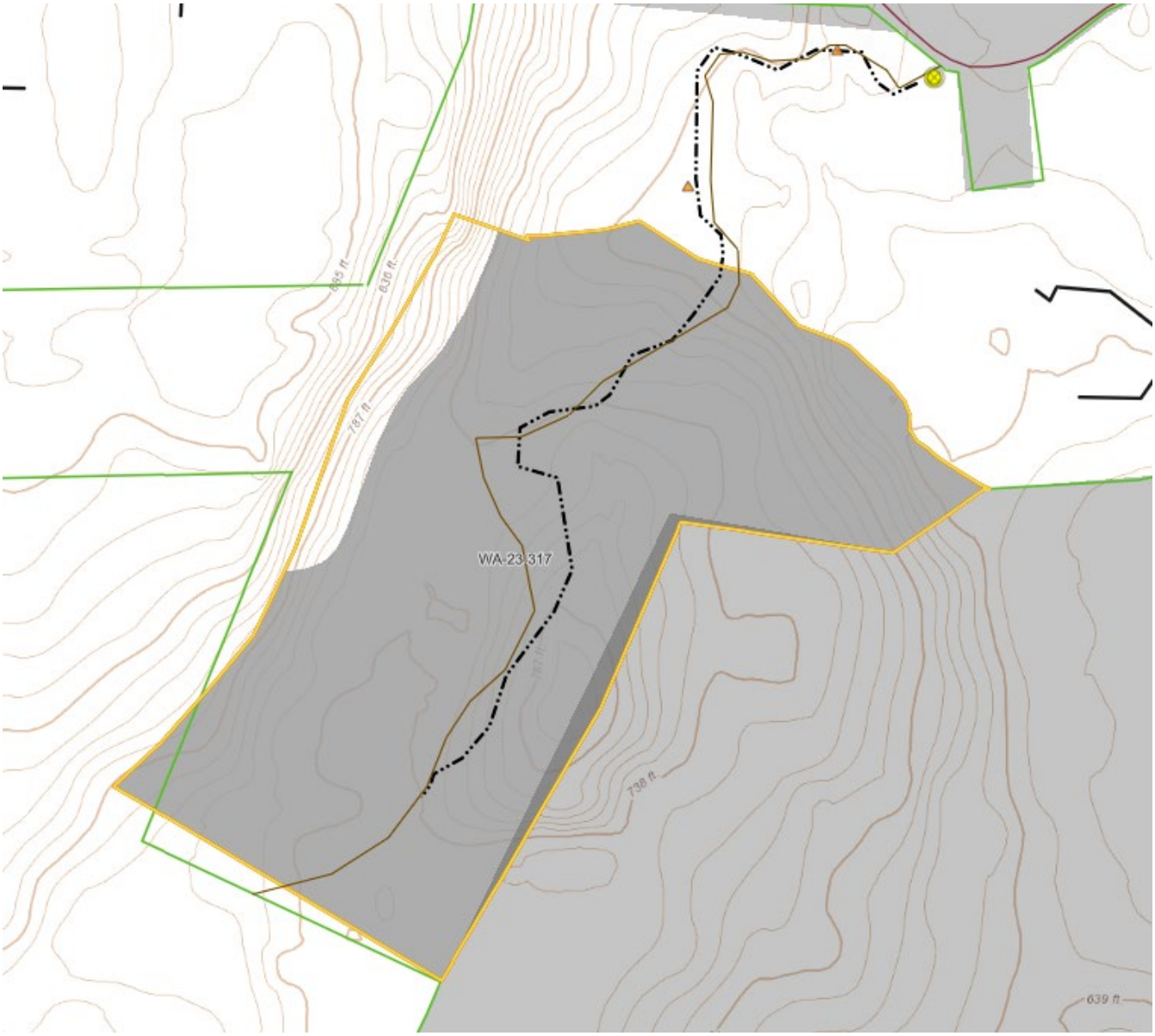


Cultural Resources

Comments on Cultural Resources:

DCR will implement appropriate BMPs as recommended by the DCR archaeologist to minimize impacts.

Figure 8. Stony and Extremely stony soils, WA-23-317.



Wildlife Resources & Rare and Endangered Species

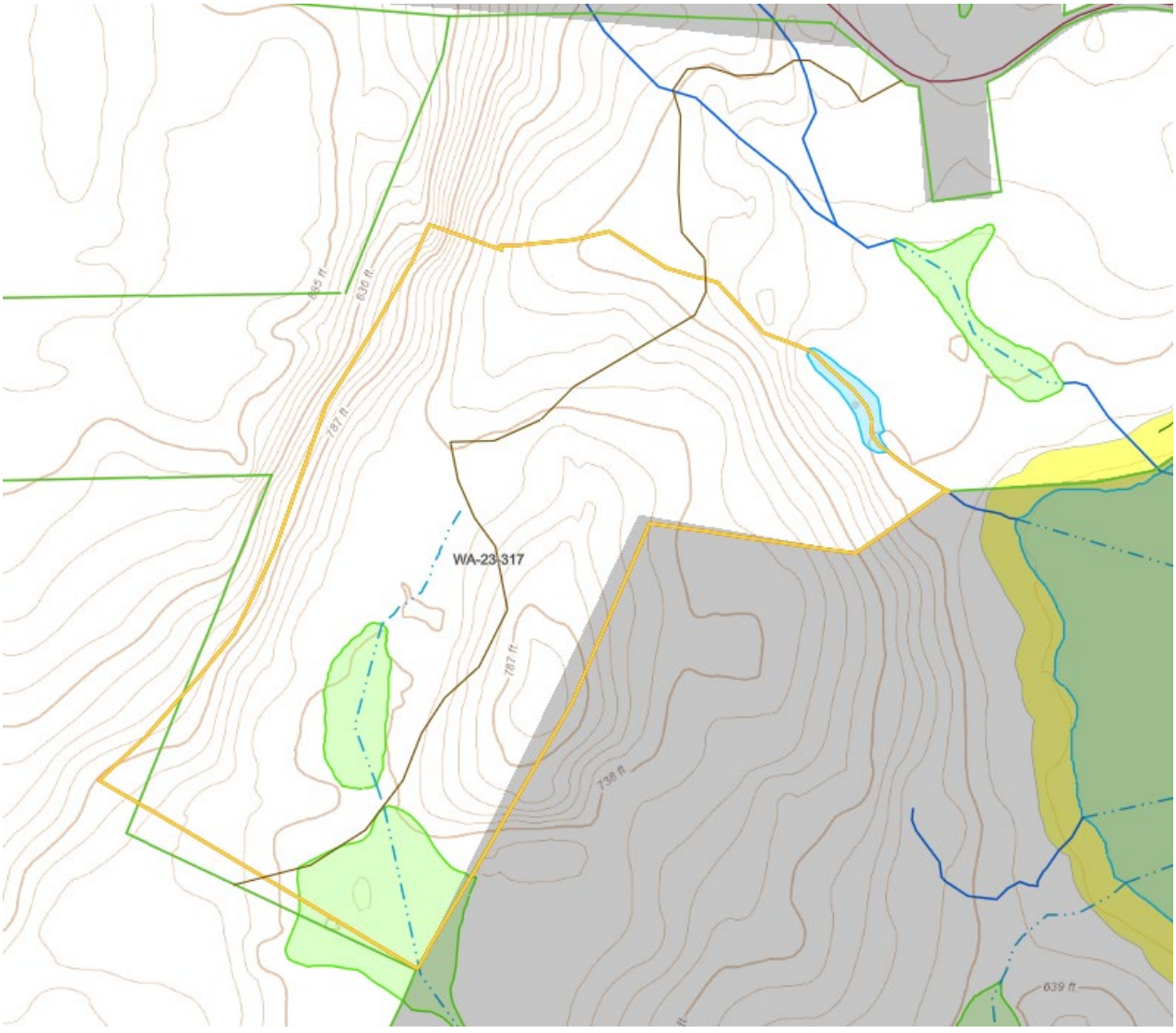
General Wildlife Comments:

The large bouldered slope along the western edge of the working unit is very unique. No vernal pools. Browsing pressure is light; mountain laurel is the more likely cause for the sparse regeneration.

Comments on Rare Species/Habitats:

None.

Figure 9. NHESP Priority habitat overlay, WA-23-317.

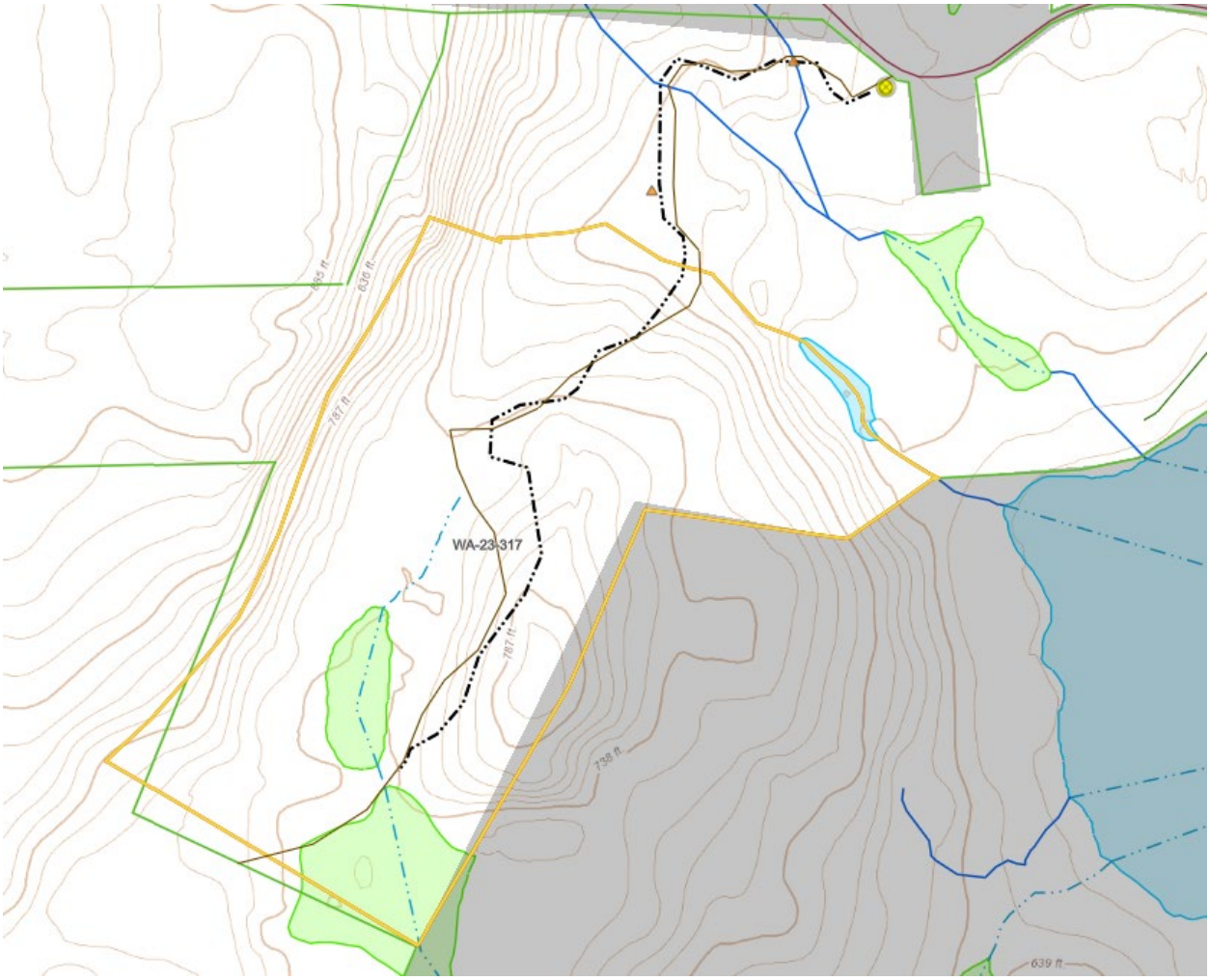


Environmental Quality Engineering

Comments on EQ Issues:

No EQ concerns with using these existing crossings with appropriate BMPs.

Figure 10. Access planning, WA-23-317.



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. Landing on Lucas Road has been used for two previous projects.

Figure 11. DWSP FY 2023 Forestry Proposals – Master Legend for story maps