Quabbin Harvest Proposal NS-21-03

Proposal Update, May 2024:

This forestry proposal was originally approved through the public process in 2020. 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 2020 in ArcGIS Online Story Map format.

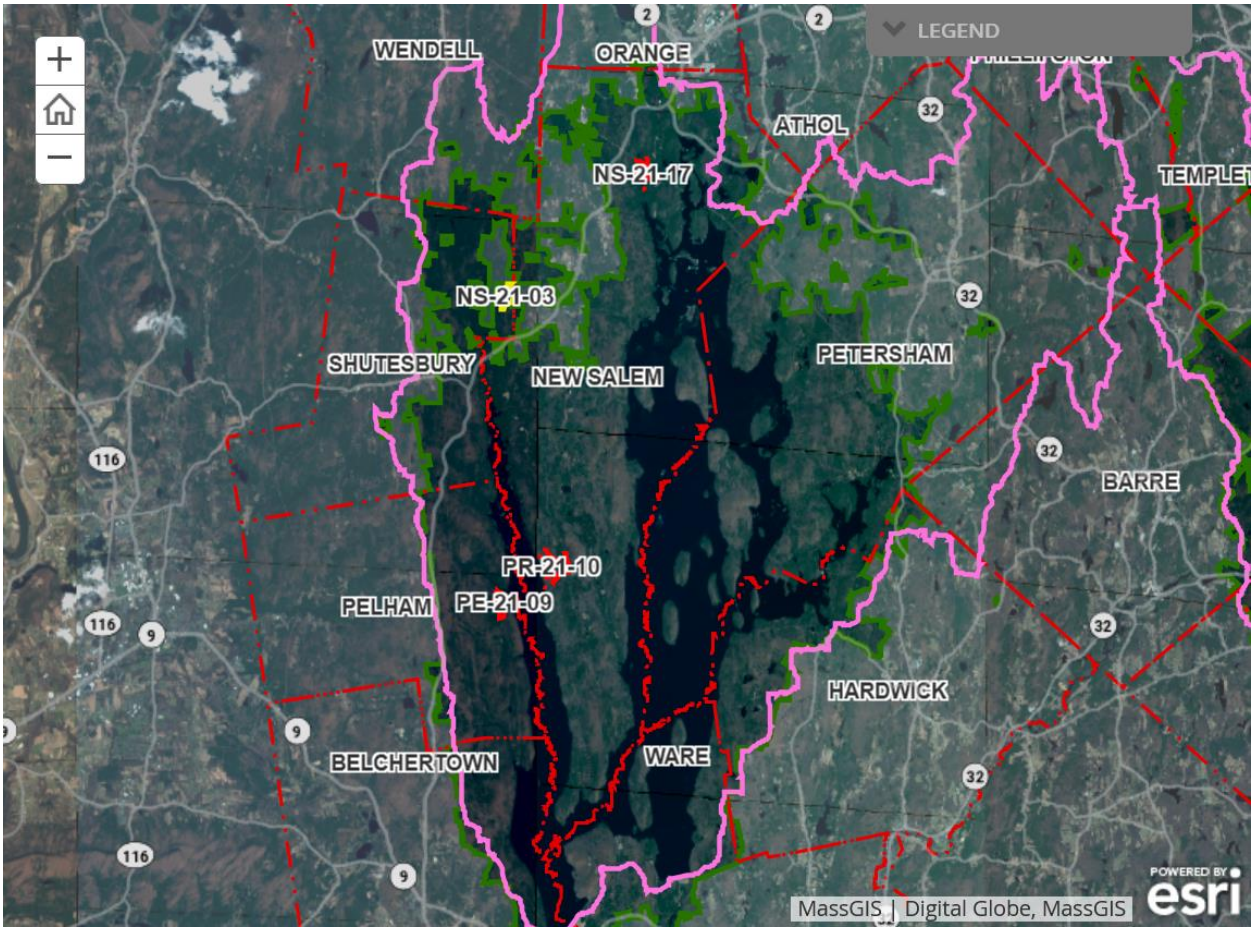
Proposal Goals

The proposed area has a mostly single aged canopy with regeneration hampered by pervasive mountain laurel. The goal of the proposed harvest will be to increase age diversity by treating mountain laurel and increasing light availability to provide opportunities for new regeneration, and release existing regeneration.

Proposal Location

The proposal is bounded to the north by North Macedonia Road. The remaining boundaries are delineated by change in type and steep slopes.

Total Acres: 73



	Overstory Type(s)	Acres
Dominant	White pine/hardwood	51
Secondary	Oak/hardwood	21
Other	White pine/hemlock	1

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

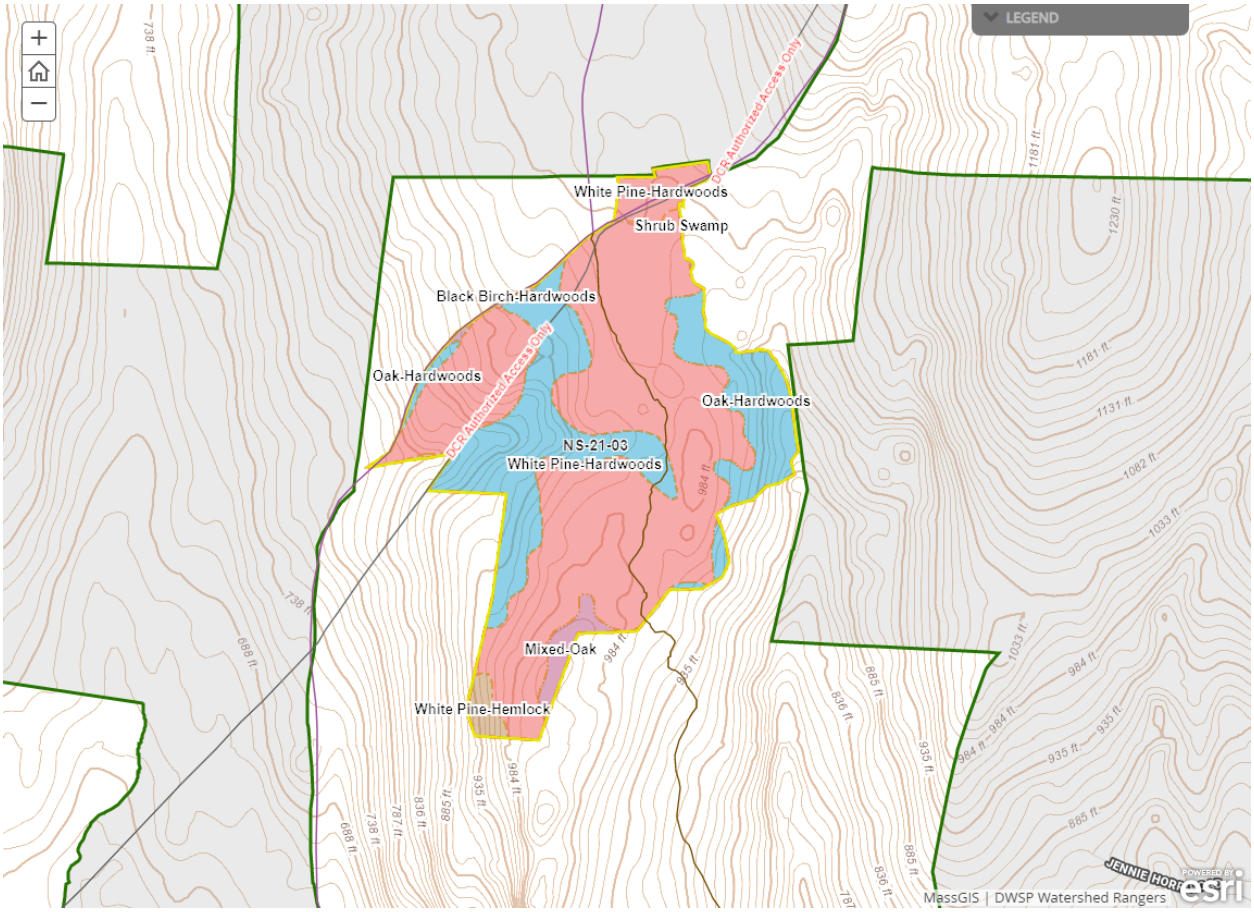
Description of forest composition/condition:

The lot is primarly white pine/hardwood to oak hardwood. The average basal area of the proposed harvest area is 118 (± 6.3) ft²/acre with a single age normally distributed size class averaging 17" dbh. The proposed area is dominated by white pine of moderate quality averaging 19.2" diameter, followed by red oak averaging 17.5" diameter. Minor overstory species include red maple, black birch, black and white oak. There are 4-10 ft tall mountain laurel thickets present throughout the white pine/hardwood and oak/hardwood stands, often reaching greater than 70% of ground cover in half of sampled white pine/hardwood or oak/hardwood plots and inhibiting any regeneration. Hemlock stands are present in the southwestern corner of the proposal along west to northwestern aspect slopes. Hemlock here looks relatively healthy with full tall crowns, and some of the red oak present appears to be developing tertiary bark. There is some small gap filling from black birch which is now old enough that the stand should be considered at least two aged.

An old cart road runs north to south through the proposal and hosts a trail in current use by the public. Operations will avoid running down the cart road and will protect and cross perpendicular to the path or the cart road. During operations the trail will be closed to the public.

Assessment of Terrestrial Invasive Species:

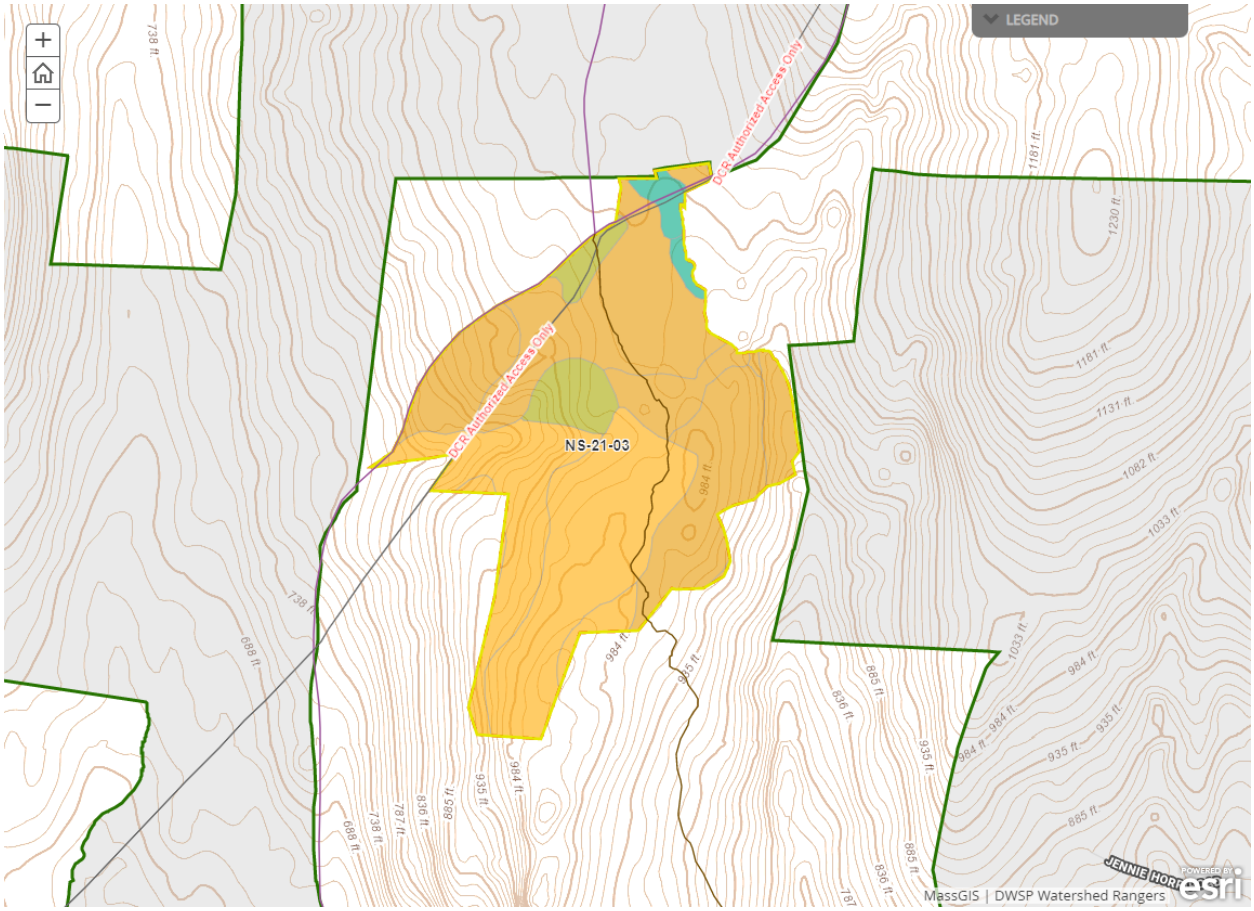
Invasive species were not observed during a prism cruise of the proposed area. However there is a known infestation of invasive stilt grass (Microstegium vimineum) at the proposed landing site and all along Macedonia Road. Harvest of this proposal will only proceed upon successful control of the stilt grass and the approval of NR to proceed.



Soils

Drainage Class	%
Excessively Drained	0
Well Drained Thin	41
Well Drained Thick	50
Moderately Well Drained	6
Poorly to Very Poorly Drained	3

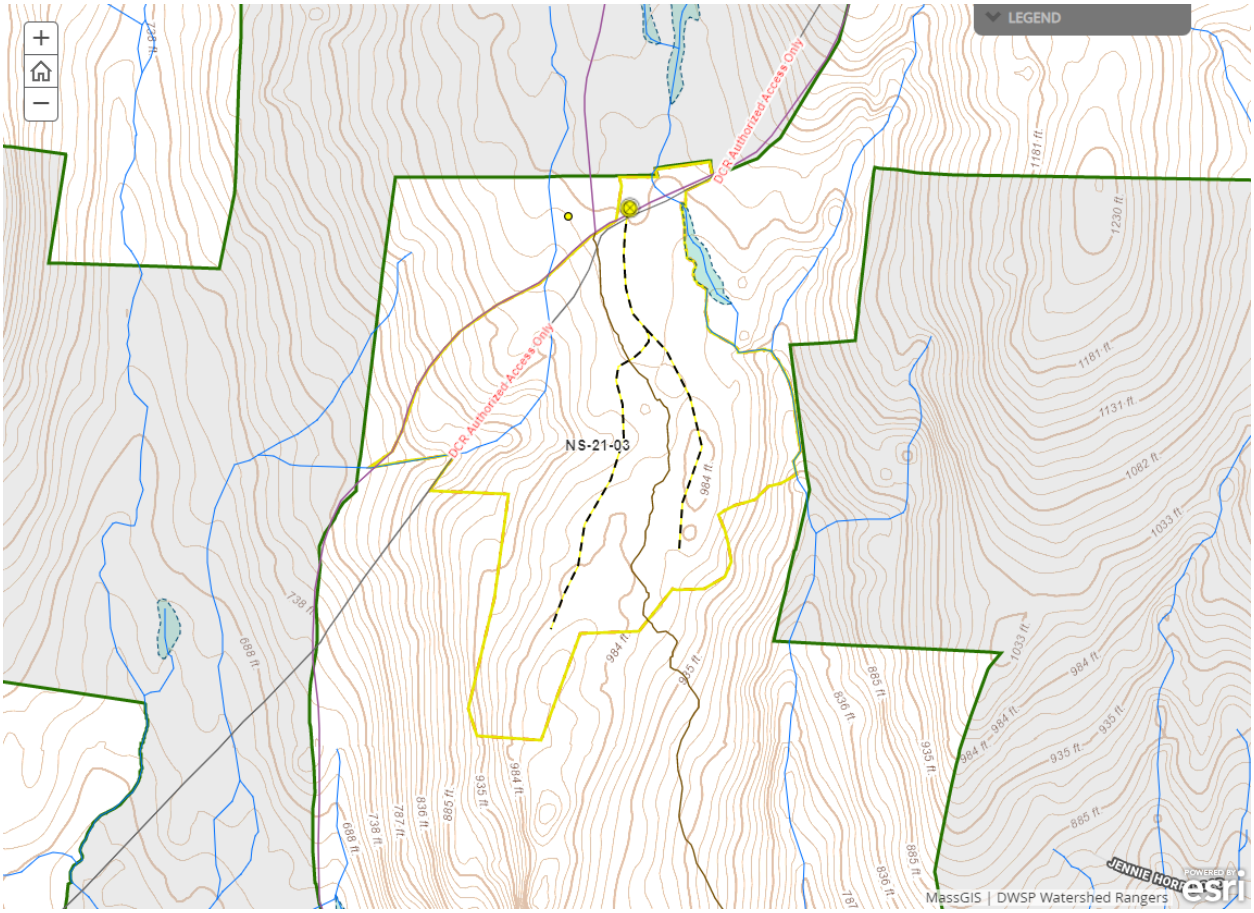
More than half of the lot is on Montauk fine sandy loam, with Chatfield-Hollis complex making up another third. Scituate fine sandy loam, Swansea peat and Ridgebury gravelly fine sandy loam are minor components.



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** **(Riparian Zone Mgt)**
- Is logging in wetlands planned? - **No**

The lot borders a wetland to the northeast which is not proposed for management at this time. All crossings are culverted in Macedonia Road. One potential vernal pool near the landing location will be treated as a verified pool and given appropriate buffers.



Silviculture

Acres in Intermediate cuts: **15**

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

Acres in Regeneration cuts: **25**

Average regen opening size: **0.5**

Maximum regen opening size: **1**

Description of advance regeneration in proposal area:

Advanced regeneration under the previous shelterwood harvest is well established and is just below or reaching small pole size timber, with scattered patches of opportunistic small sapling

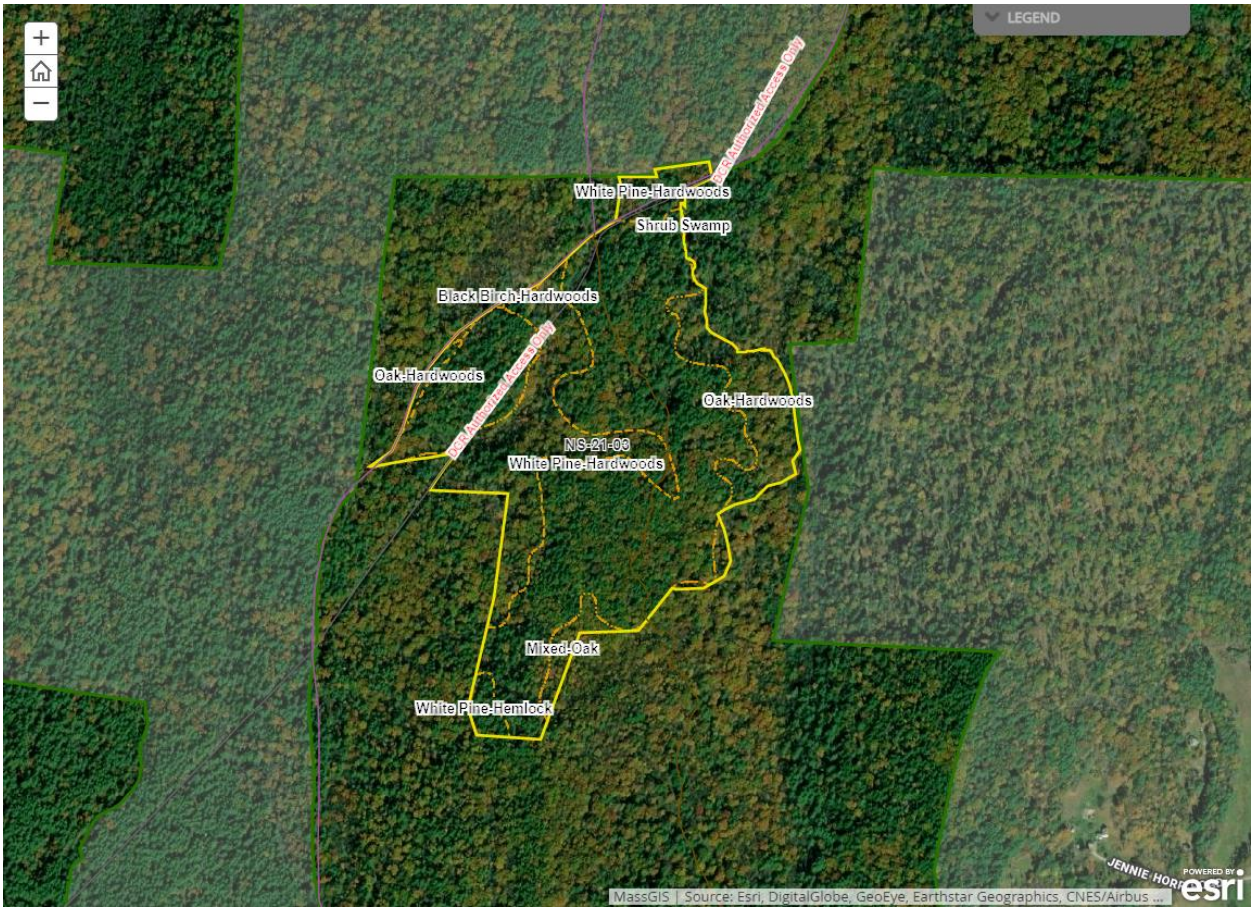
white pine and mixed hardwoods. Unfortunately there are also many large patches of mid-sized to tall mountain laurel monocultures preventing new regeneration from establishing. These mountain laurel patches are most prevalent to the southwest under white pine and white pine/hardwood cover. Areas with hemlock overstory are mostly without regeneration outside of some small gap regeneration.

General comments on silviculture proposed:

Most of the white pine/hardwood area will see a partial shelterwood removal (shelterwood with retention) cut lowering overstory basal area to 15-25 ft^2 / acre. The resulting stand will have a two aged structure instead of the even aged structure of a traditional shelterwood removal. Retention will favor healthy, well-formed white pine and northern red oak (which both have a higher site index in the Montauk soils). Retained trees will be spatially aggregated as much as possible to reduce windthrow and provide a range of light intensity in the understory allowing for a light habitat range of mid- to shade-intolerant species. Operators will be required to mechanically treat mountain laurel to below 20 % of ground cover where it is present. The goal will be to maximize the opportunity for faster growing shade-intolerant to mid-tolerant species to regenerate before the slower growing mountain laurel is able to sprout and reestablish understory dominance.

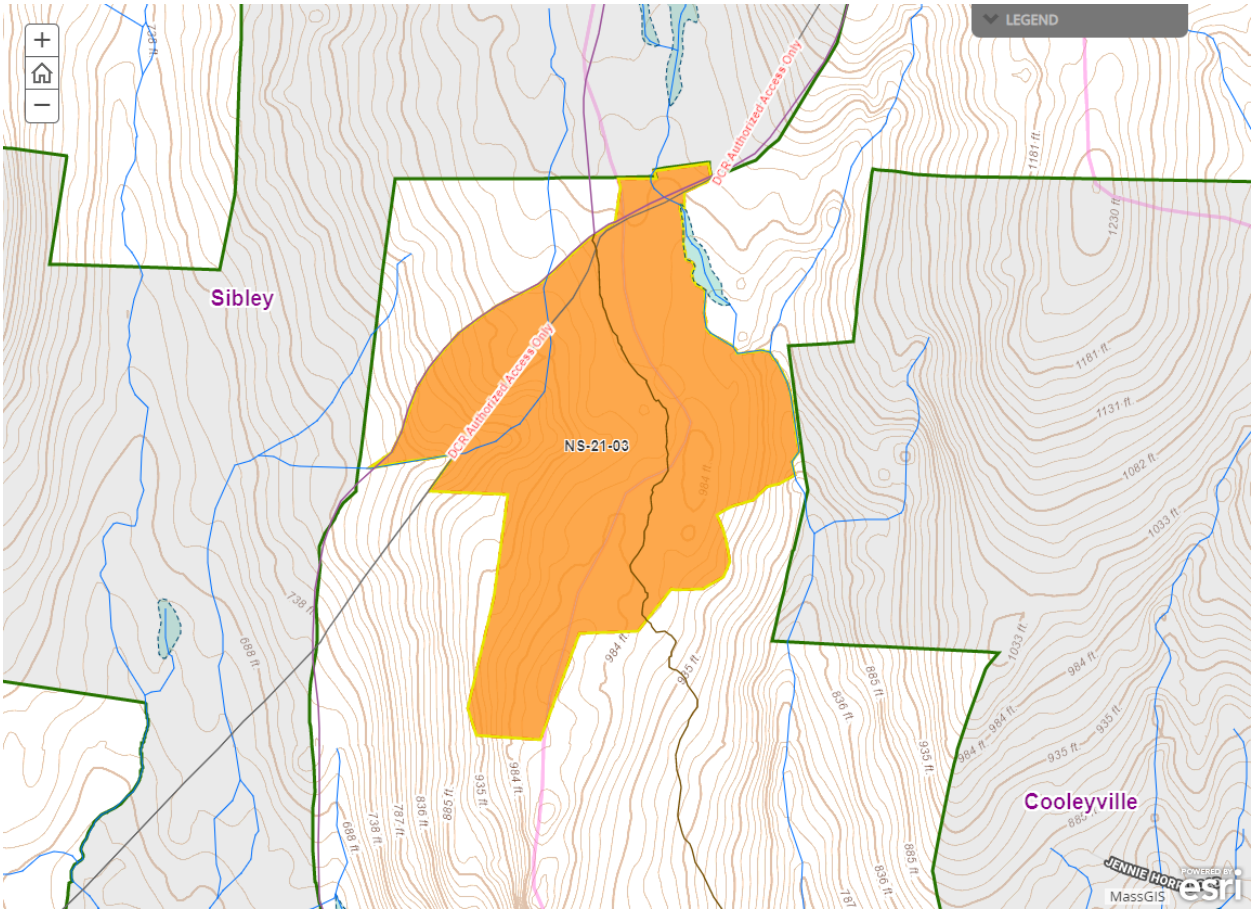
The oak/hardwood stands will be treated with small to intermediate (0.25-0.75 acre) sized regeneration openings, with thinning in the matrix. Openings will target preferred established regeneration. A few larger openings (maximum of 1 acre) will be used to target mountain laurel thickets with mechanical treatment similar to in the white pine/hardwood. Retention will favor white pine and northern red oak well suited to the site, and well formed individuals less represented on site.

Silviculture in the southwestern hemlock stand stand will focus on thinning and improvement harvest of unhealthy or poorly formed individuals. Given the recent trends regionally of decreasing hemlock woolly adelgid and the sheltered aspect and elevation, the stand will be treated as a hemlock stand refugium and efforts will be made to limit gap size and avoid altering stand composition.



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
66 (Sibley)	1028	0	251	45
84 (Cooleyville)	509	15	112	30



Harvesting Limitations

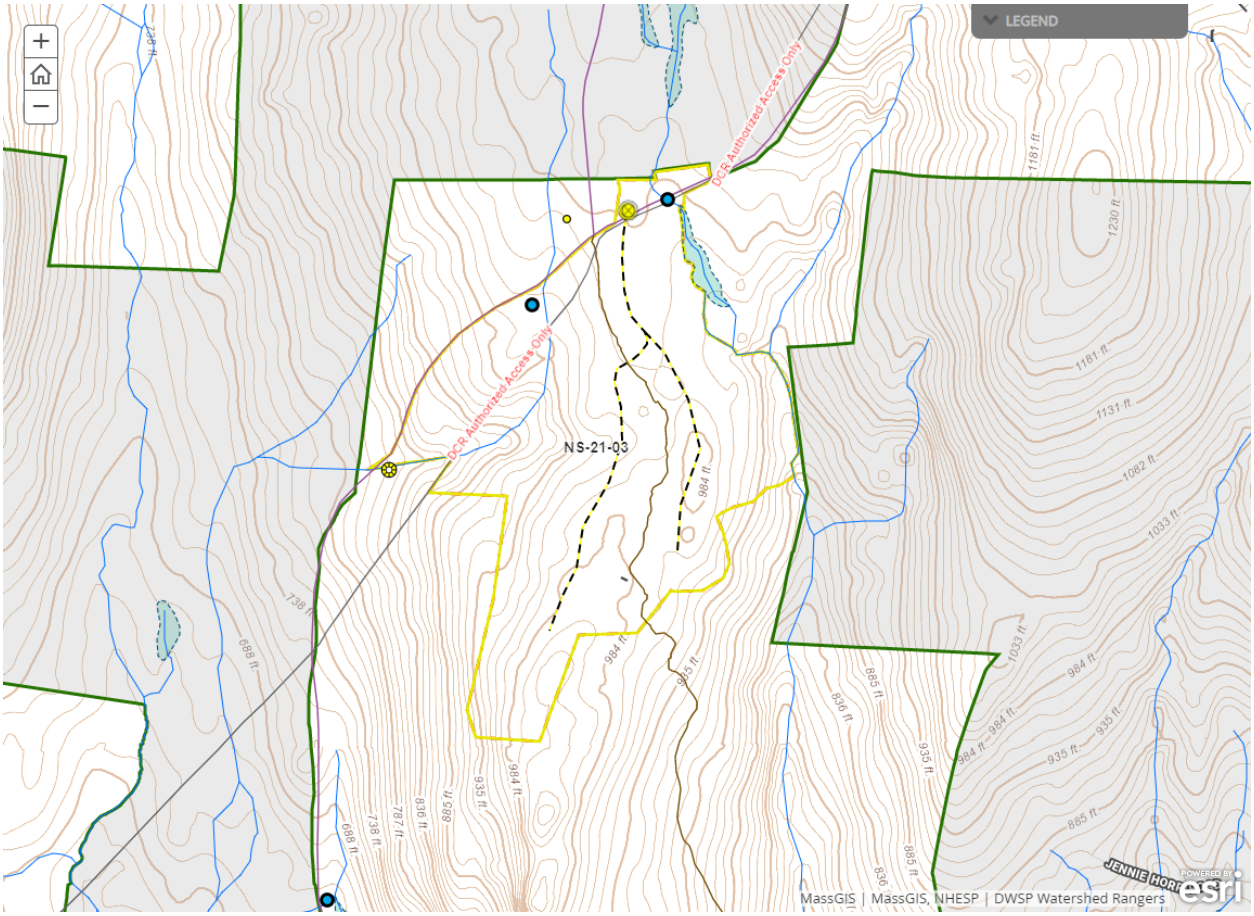
Forwarder required: **Yes**

Feller/processor required: **No**

Steep slopes present: **No**

Comments on harvesting limitations:

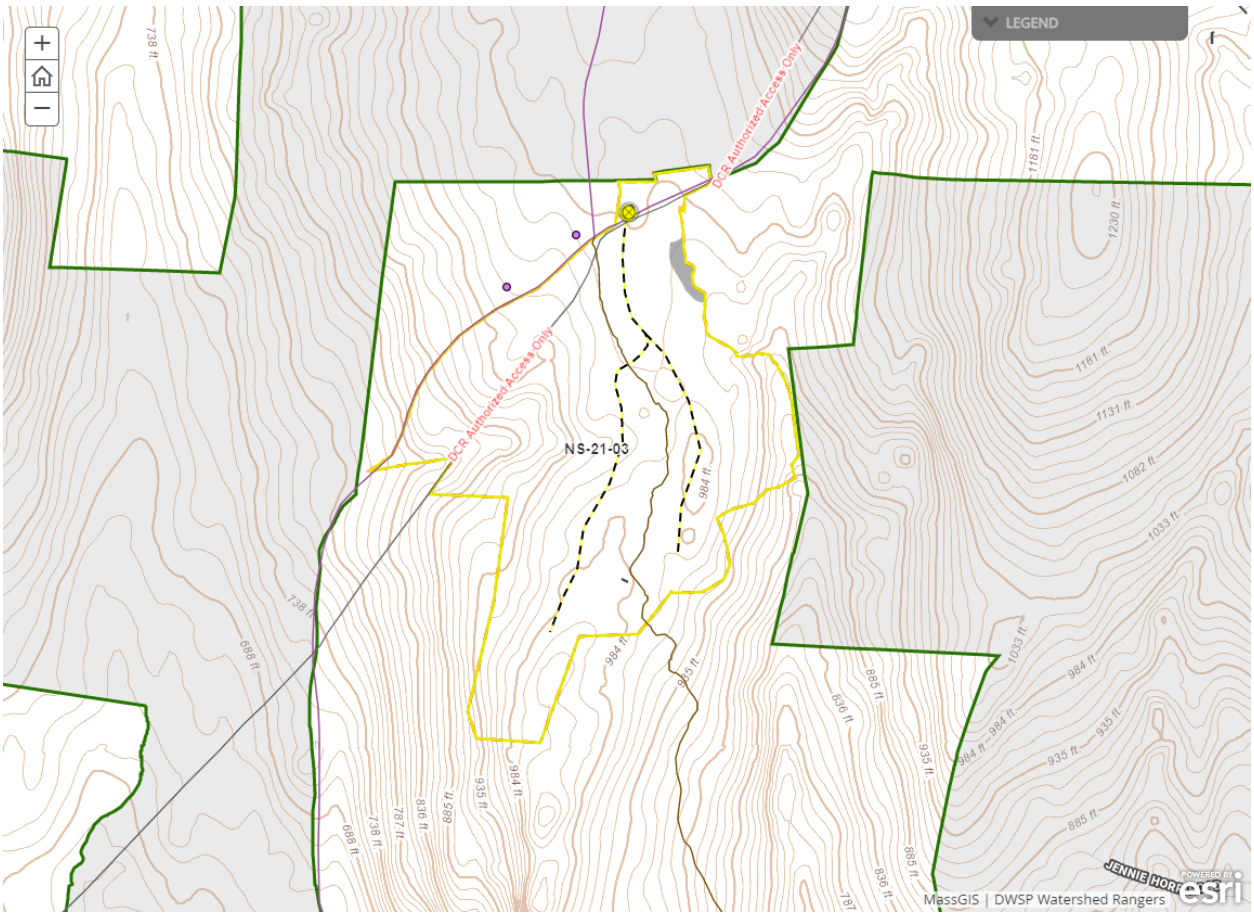
The presence of a public trail running north to south makes skidding a large portion of the lot undesirable, and a portion of the lot will need to be forwarded up a DCR road to a landing so a forwarder will be required. During harvest the trail will be closed and the operator will be required to armor the trail where crossed (poles or bridge panels).



Cultural Resources

Comments on Cultural Resources:

Stone walls are limited within the proposed area and will be avoided and/or protected as per current DWSP policy. If any currently unknown cultural resources are located during the course of preparing and harvesting this proposal DWSP will work with DCR archaeologists to identify and protect them.



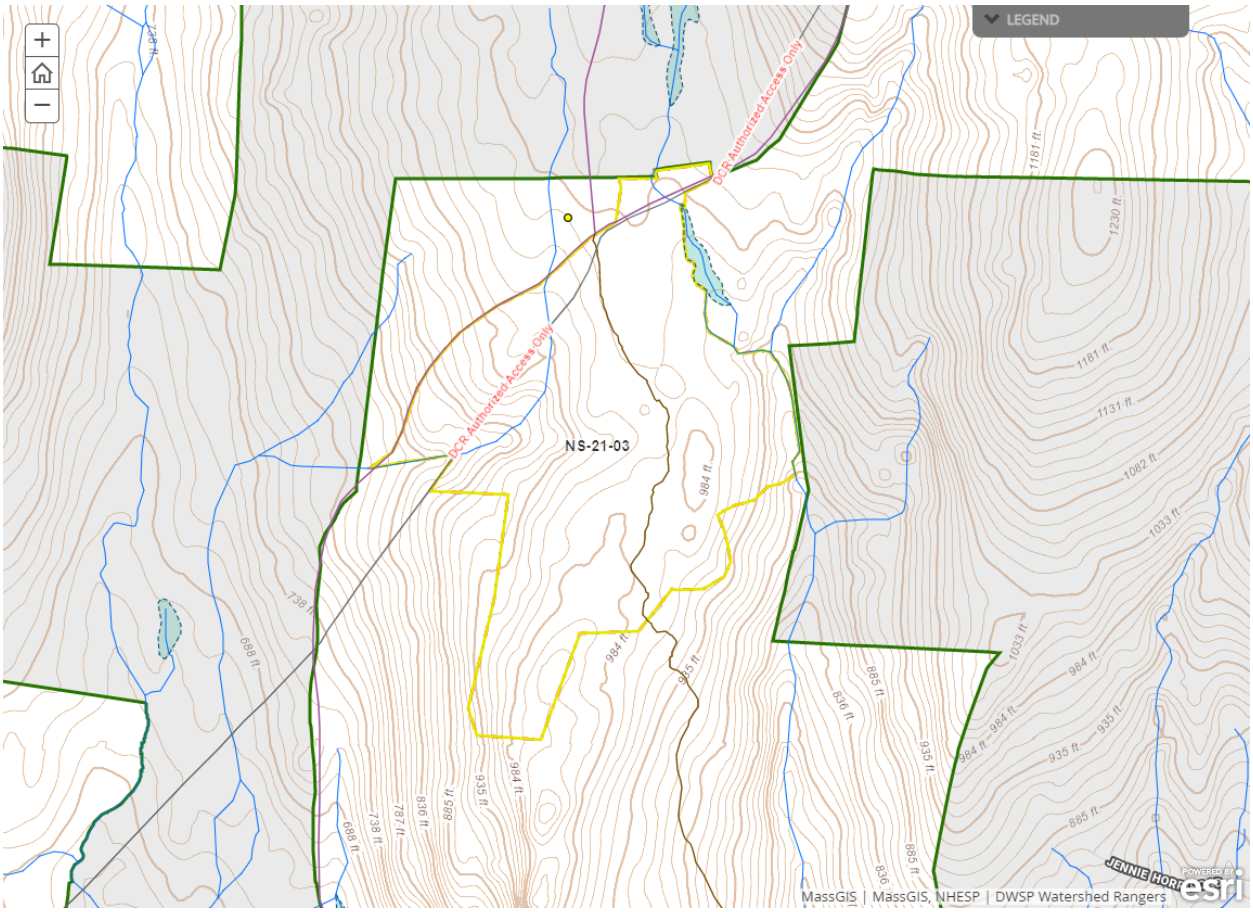
Wildlife Resources & Rare and Endangered Species

General Wildlife Comments:

Some sign of current browse pressure. Abundant mountain laurel indicates extensive past deer impacts.

Comments on Rare Species/Habitats:

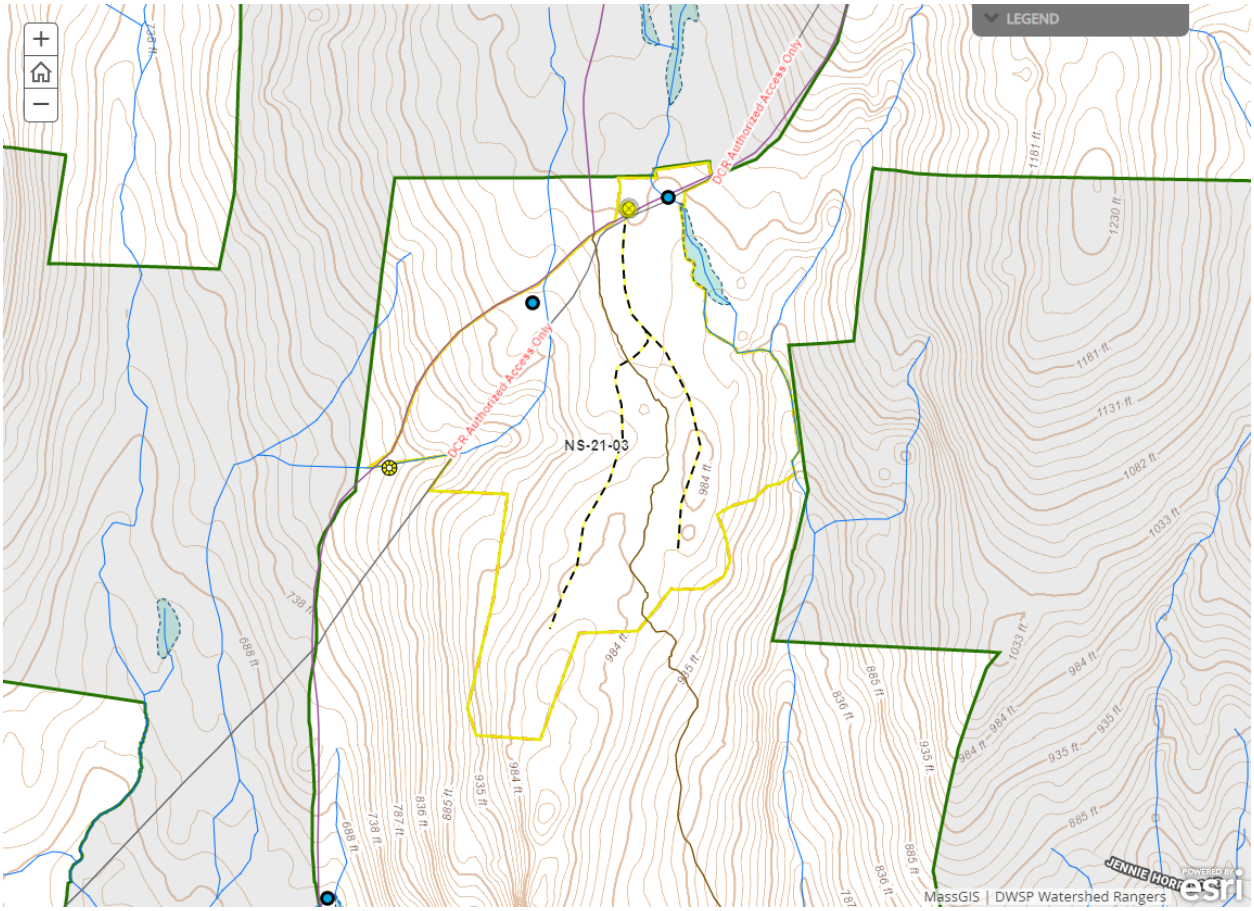
No rare species or habitats known near the proposal area.



Environmental Quality Engineering

Comments on EQ Issues:

No stream crossings are proposed.



Forest Access Engineering

Gravel needed: Yes

Landing work needed: No

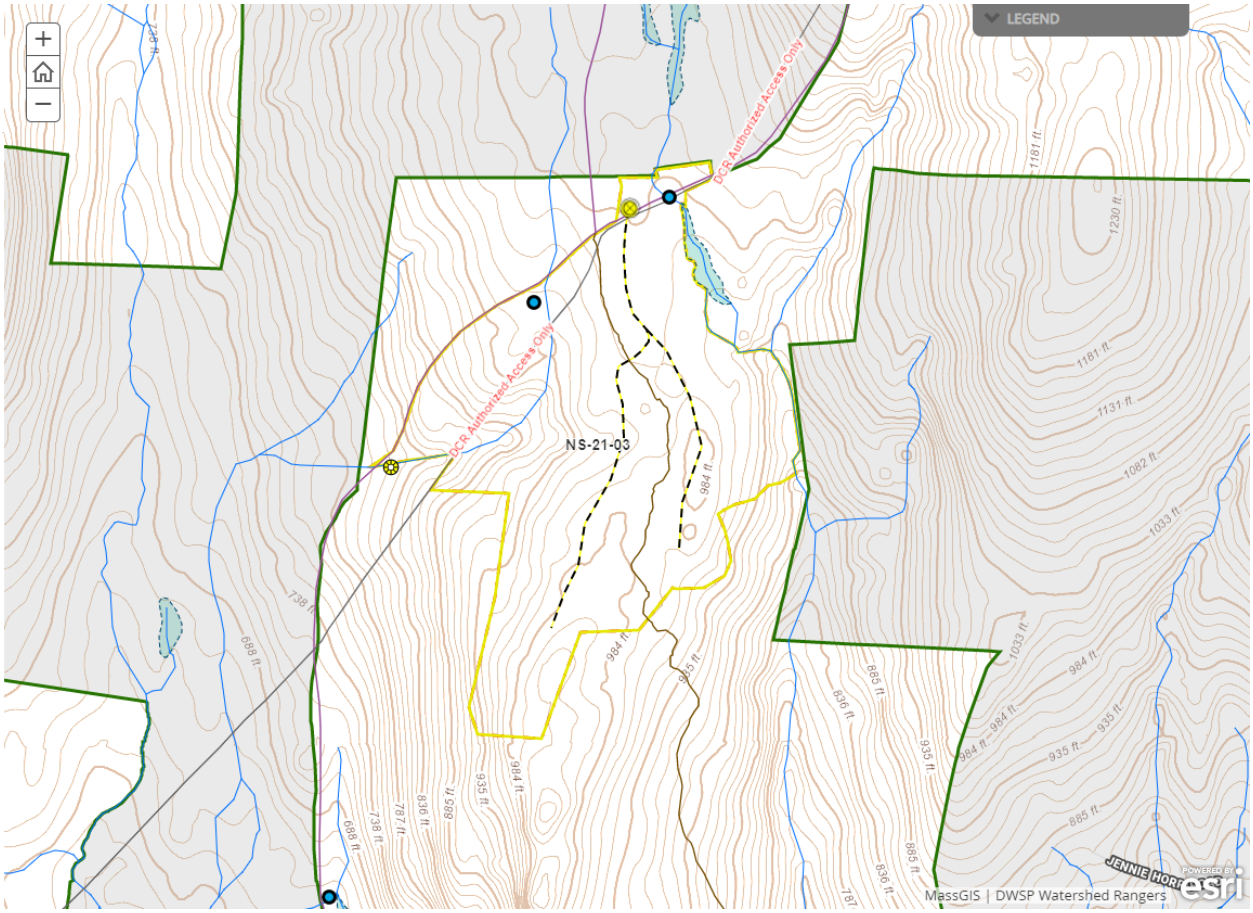
Culverts needed: Yes

Work needed on permanent bridges: No

Beaver issue: No

Further comment on access needs:

North Macedonia Road is in need of surface repairs and culvert work between the gate and the landing. Some work may need to be done to clear off or expand the landing, but that may be able to be handled by the operator.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DWSP FY 2021 Forestry Proposals – Master Legend for story maps