Quabbin Harvest Proposal PR-22-02

Proposal Update, May 2024:

This forestry proposal was originally approved through the public process in 2021. At that time, salvage of the dead and dying oak was a component of the proposed management. However, salvage was not the primary objective driving the decision to implement forest management in this area and ***salvage of the dead and dying oak will no longer be part of this proposal****. 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 remaining activities in this proposal align with EEA climate considerations developed from the recommendations in the report issued from the CFC. The proposal language and mapping below are preserved unchanged from that presented to the public in 2021 in ArcGIS Online story map format, but* ***the reader should ignore references to salvage****.*

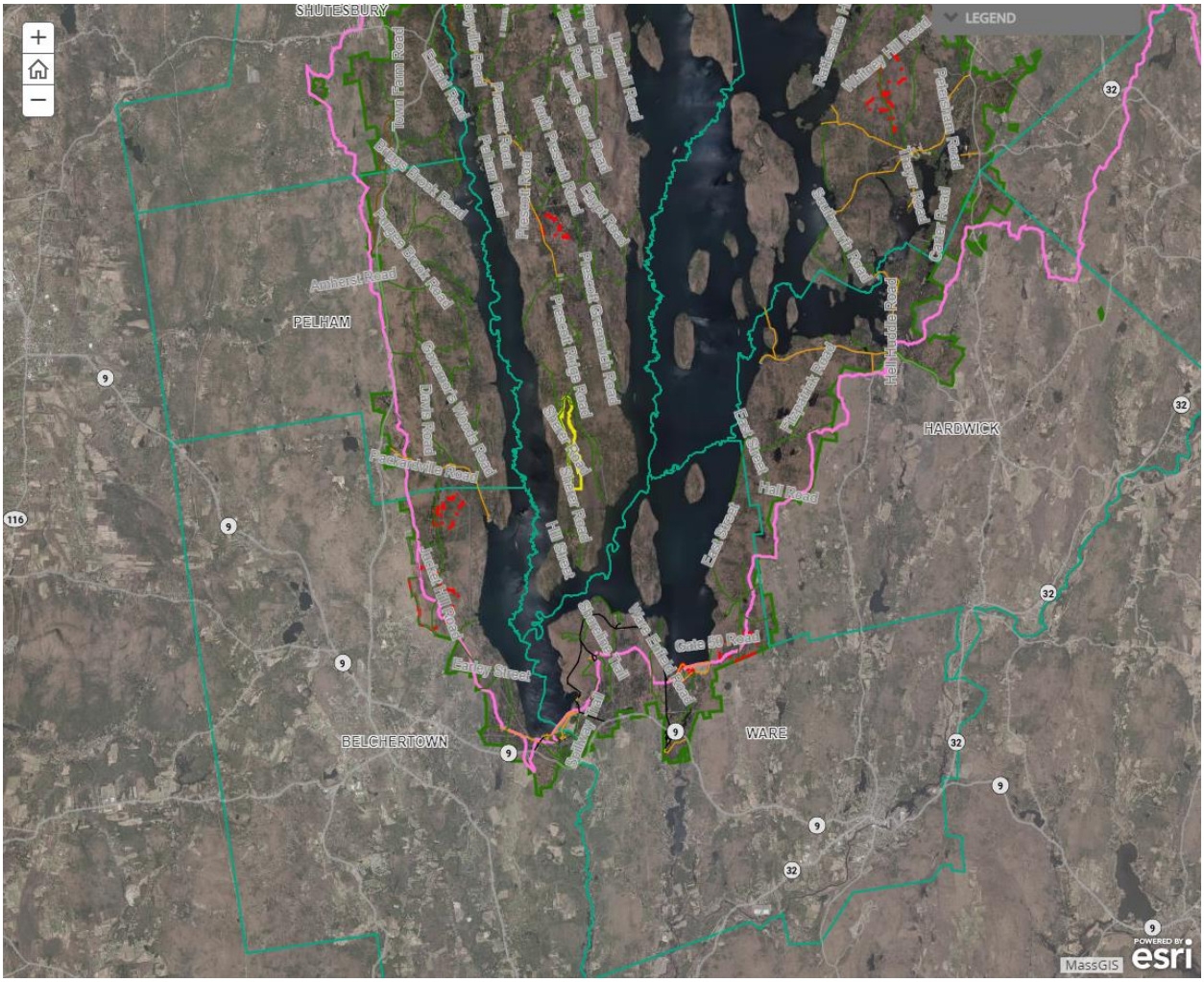
Proposal Goals

Diversifying forest structure and overall complexity is the primary purpose of the proposed harvest.

Proposal Location

The proposal area is bounded to the west by Sherer Road, to the south by northern boundary of past harvest 3064, to the east by steep slope/height of land or west boundary of past harvest 3124, and north by an un-named watershed access road connecting Prescott Ridge Road and Sherer Road.

Total Acres: 134



General Description

	Overstory Type(s)	Acres
Dominant	Oak, mixed - dry site	108
Secondary	White pine - oak	26
Other		

	Understory Type(s)

Dominant	Tree seedlings/saplings dominate site
Secondary	Dry site - blueberry/huckleberry

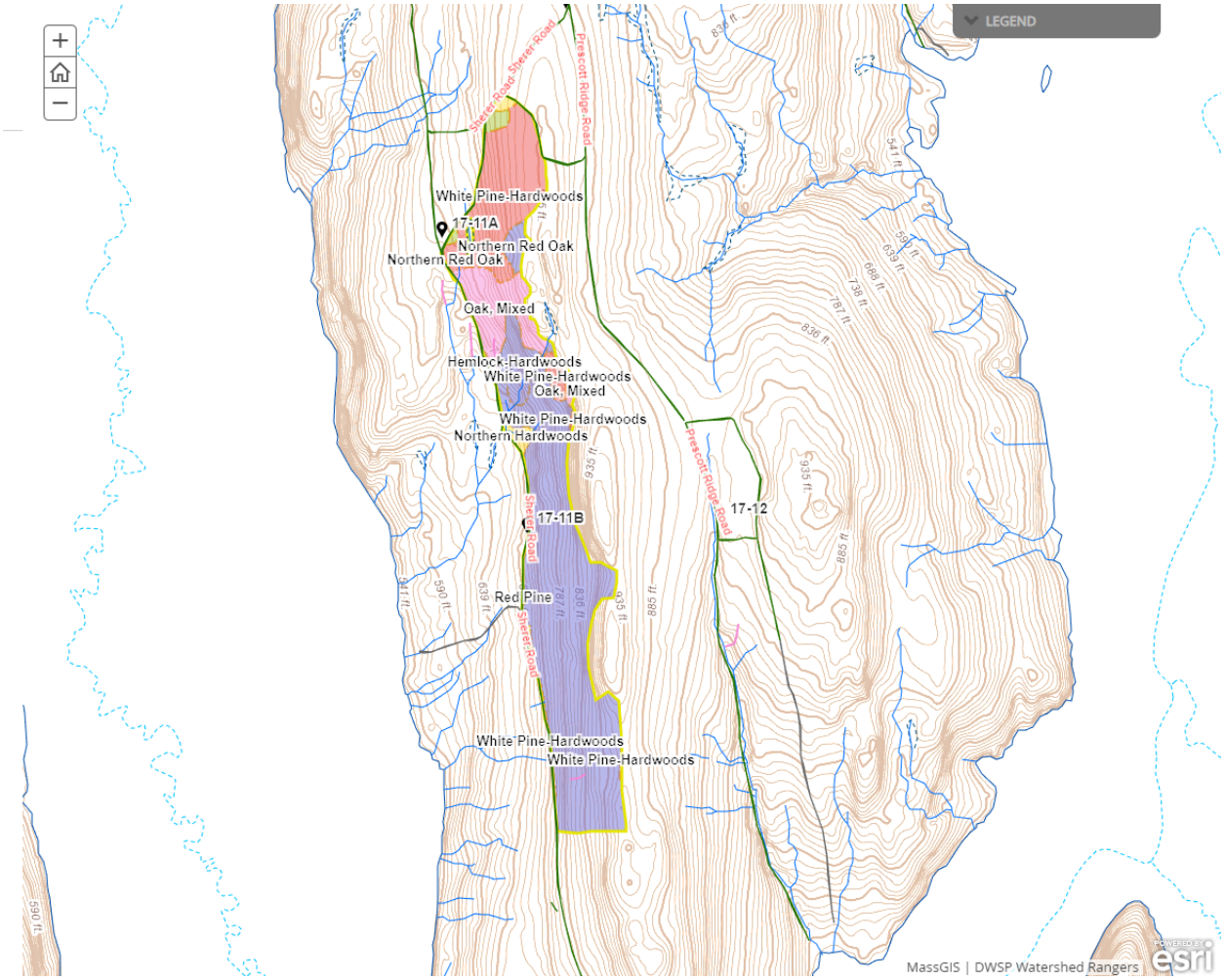
Description of forest composition/condition:

The area encompasses a sawtimber-sized even aged mixed species forest. Generally, white pine is concentrated in the area's northern quarter and is large diameter with average to below average quality. Primary overstory associate is mixed oak (black, white, red, scarlet and chestnut). Mid-canopy composition is red maple, black birch and hickory. Sapling black birch, white pine, hickory and scattered oak occupy the understory; the result of an in-house salvage harvest completed in 1989.

The remaining area is red oak dominated with a light to moderately stocked mid-canopy of black birch, red maple and hickory. Red oak stocking levels vary with site; drier locales (upper slope) have less red and more black and scarlet. And vice versa on more mesic spots (lower slope). A latitudinal pocket of dry/shallow soils (pronounced rock outcrops/mountain laurel understory) has a high stocking of chestnut oak as well as scattered ailing hemlock. White pine is scattered individually or in small groups. Beneath the closed oak canopy lies a dense developing understory of white pine estimated to have started in the 1980s. Significant canopy gaps have developed from oak mortality at the hands of consecutive heavy gypsy moth infestations (2016/17). Upwards of about half the oak component has experienced some mortality with about a quarter of that being severe (over 50% of trees per acre dead). Much of the heavy mortality is found on the lower slope. The demise of the oak has been fortuitous for the understory white pine which has responded well to the increase in light reaching the forest floor. Excepting a 0.5 acre hemlock salvage harvest, natural forces have been the primary source of change in the area's mixed oak component. The salvage area is now home to mostly sapling/small pole size black birch.

Assessment of Terrestrial Invasive Species:

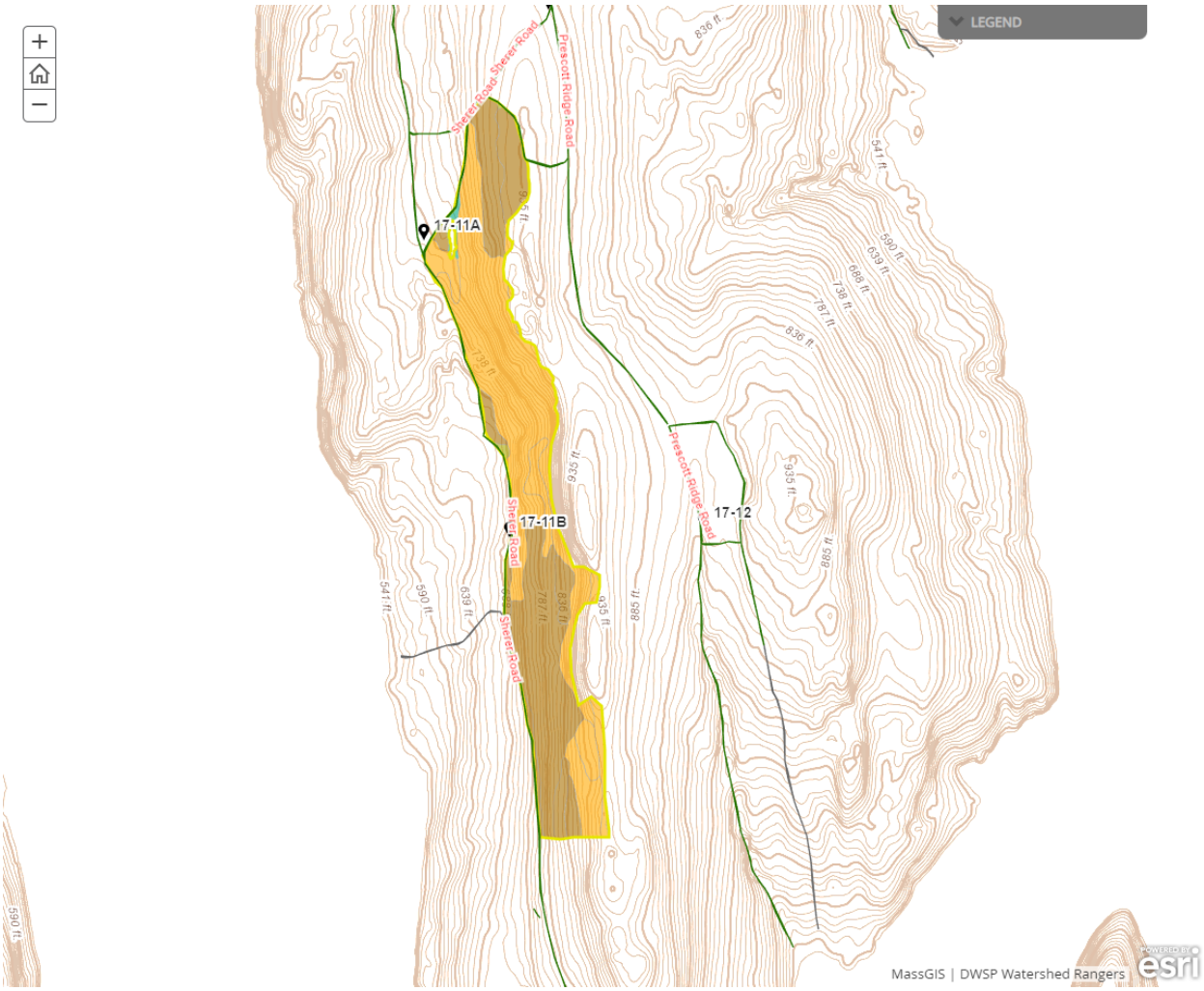
Invasive presence is light; mostly barberry found in and along edges of interior and abutting wetlands and past arable (plowed) soils. There is some knotweed on the Sherer Road log landing just south of intersection 17-11B.



Soils

Drainage Class	%
Excessively Drained	0
Well Drained Thin	65
Well Drained Thick	32
Moderately Well Drained	1
Poorly to Very Poorly Drained	1

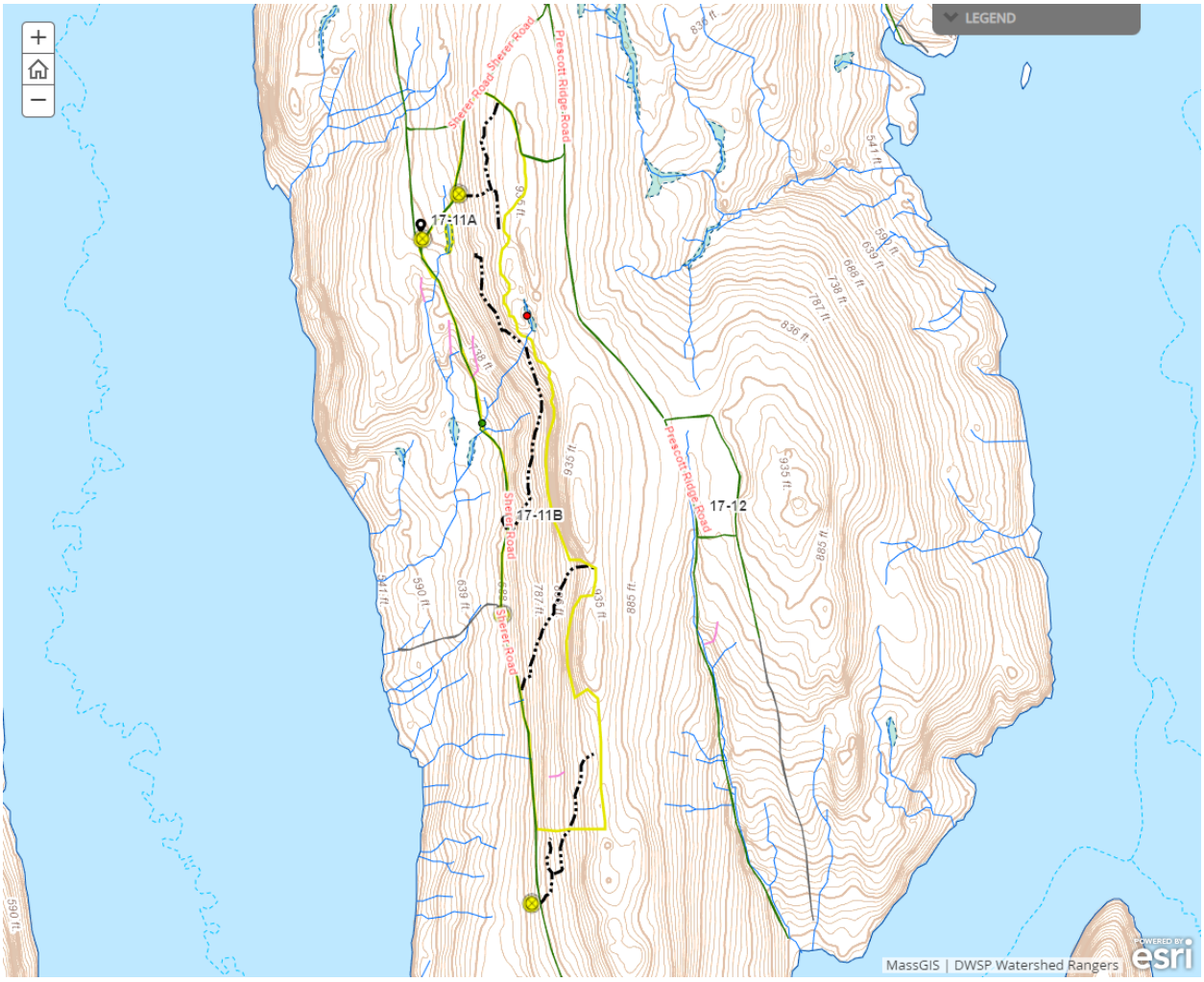
Well drained thin - Chatfield-Hollis Complex; rocky
Well drained thick - Canton-Chatfield-Hollis Complex; rocky
Moderately well drained - Extremely stony Newfields fine sandy loam
Poorly drained - Whitman extremely fine sandy loam muck



Wetlands

- Wetlands present? - **Yes**
- Streams present? - **Yes**
- Vernal pools present? - **None known**
- Seeps present? - **Yes**
- 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**

There will likely be one stream crossing that will require a skid bridge. There is a potential vernal pool on the east side of Sherer road slightly less than a half mile south of intersection 17-11A.



Silviculture

Acres in Intermediate cuts: **0**

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

Acres in Regeneration cuts: **20**

Average regen opening size: **2**

Maximum regen opening size: **4**

Description of advance regeneration in proposal area:

Plentiful (although not particularly diverse) best describes regeneration condition. The southern 2/3 has excellent sapling/pole size white pine that for the most part has been released naturally due to overstory oak mortality. Other understory associates are black birch and red maple. The northern portion has less pine and more sapling/pole size black birch and red maple from the '89 thinning. Although sparse and stagnating, there is some oak regeneration. Browse appears light to moderate.

General comments on silviculture proposed:

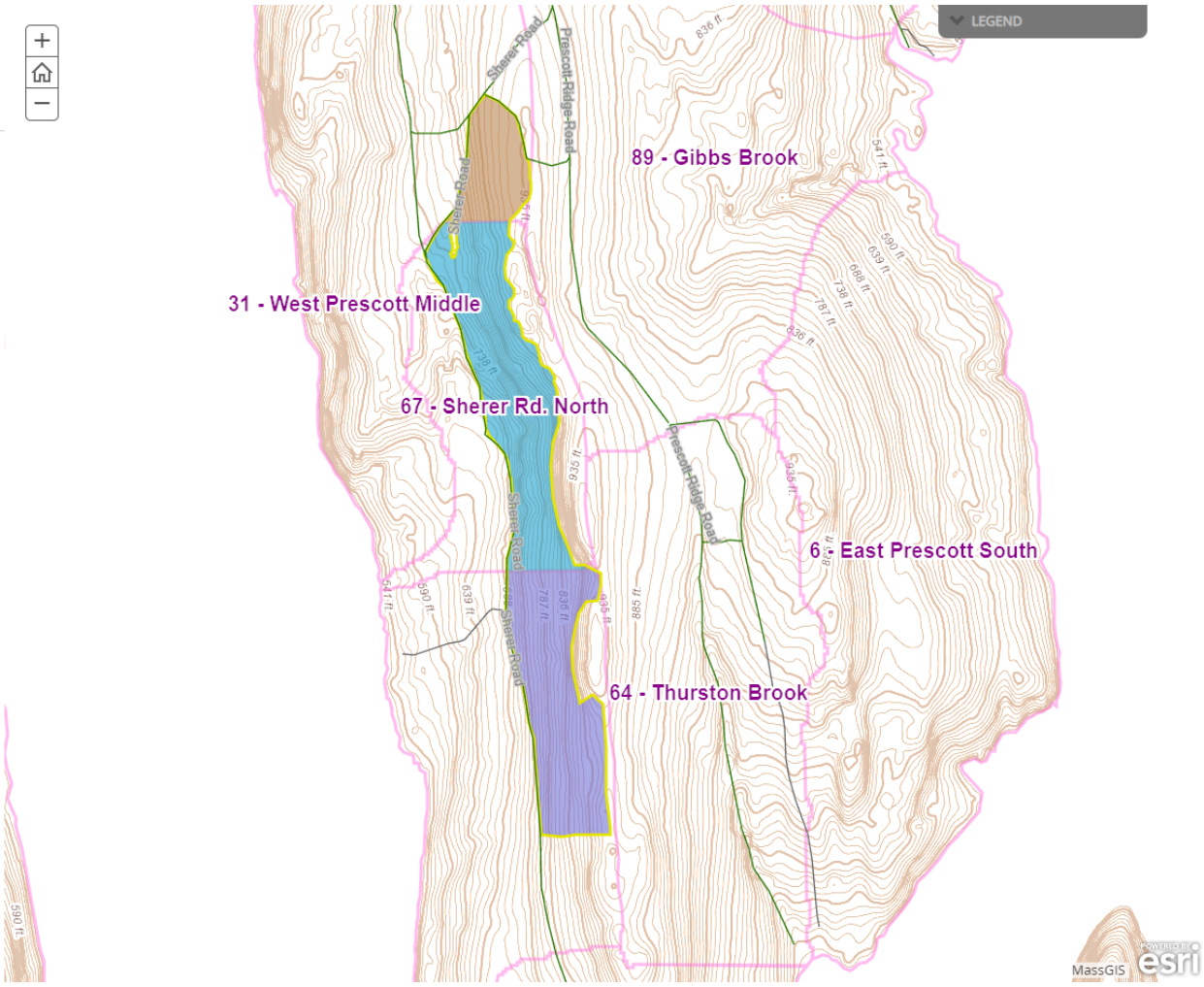
The goal of the proposed silviculture is age structure diversification. This will be accomplished by creating canopy openings primarily in the northern half of the area which encompasses a significant volume of rough large diameter white pine. Specifically, siting large openings in the northern 1/3 would enable removal of poor softwood timber and create vigorous growing conditions for seed and coppice regeneration. The area's mid-section has pockets of mixed hardwood (black birch, red maple) and dry site oak (black, scarlet, chestnut) that, in removing some, present further structural diversity. Reaching the area's southern half, the mixed hardwoods mostly fade out and are replaced by oak. Dead sections could be salvage harvested; however the cost of damaging the well formed released white pine understory outweighs the now largely cordwood value (going on 5 years decay) overstory oak. Development of the white pine understory should be augmented by targeted girdling of suppressed crown position red maple and black birch which have also been released by the dead oak. Openings can not be ruled out in this portion of the area if, for instance, a group of live poor quality oak and/or mixed hardwood with sparse/poor quality understory is located; however this is a secondary priority.

The proposed silviculture will initiate forest diversity within the area and increase continuous diversification at the compartment level. Diversification should build resiliency in warding off the effects of climate change, most notably severe weather (hurricane).

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
31 (West Prescott Middle)	855	9	205	20
67 (Sherer Road North)	140	0	35	63
30 (West Prescott South)	202	0	50	51

Proposed harvesting will not exceed the 25% threshold.



Harvesting Limitations

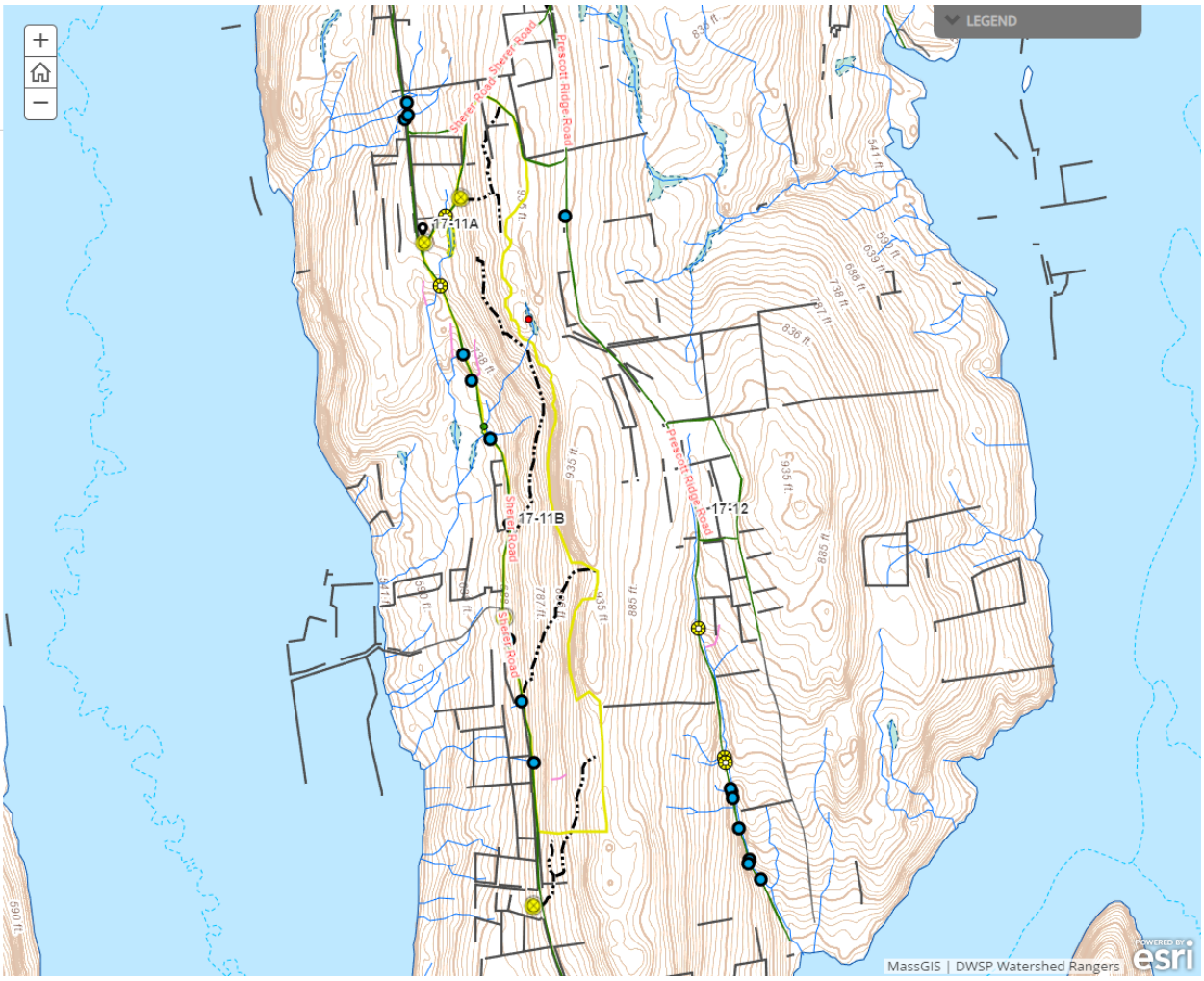
Forwarder required: **No**

Feller/processor required: **No**

Steep slopes present: **No**

Comments on harvesting limitations:

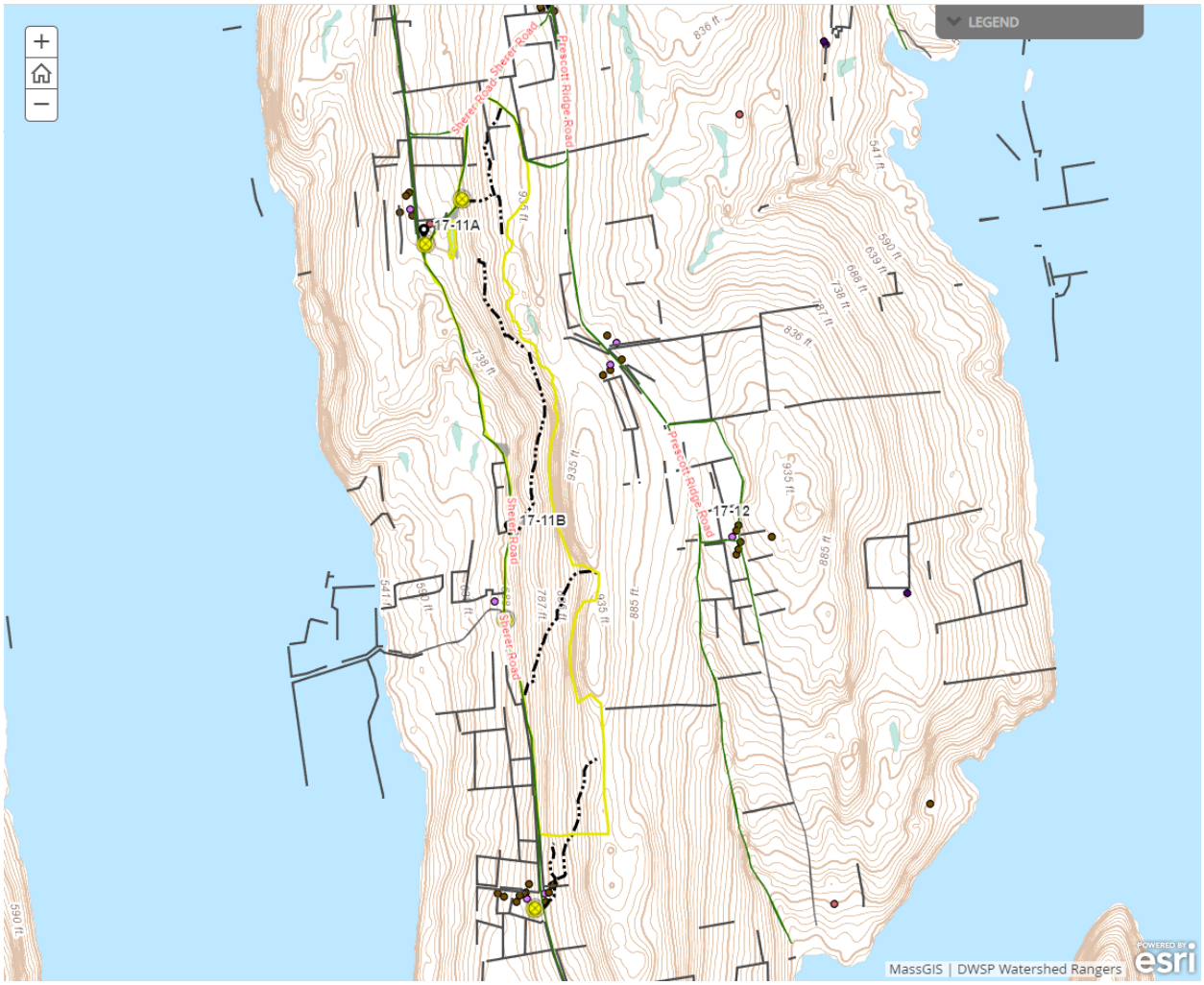
Given the rough white pine located on the northern 1/3 of the area and the lack of a softwood round pulp market, a whole tree chipping operation would best fit there. If possible other sections of the area could be done more conventionally with a forwarder and feller/processor.



Cultural Resources

Comments on Cultural Resources:

Remnants of a cellar hole or outbuilding were found just on the east side of Sherer Road. Atypical of most areas on the watershed, stone walls are scarce; just a few in the very north part. Most likely because of the moderate slope and rocky soil (not arable).



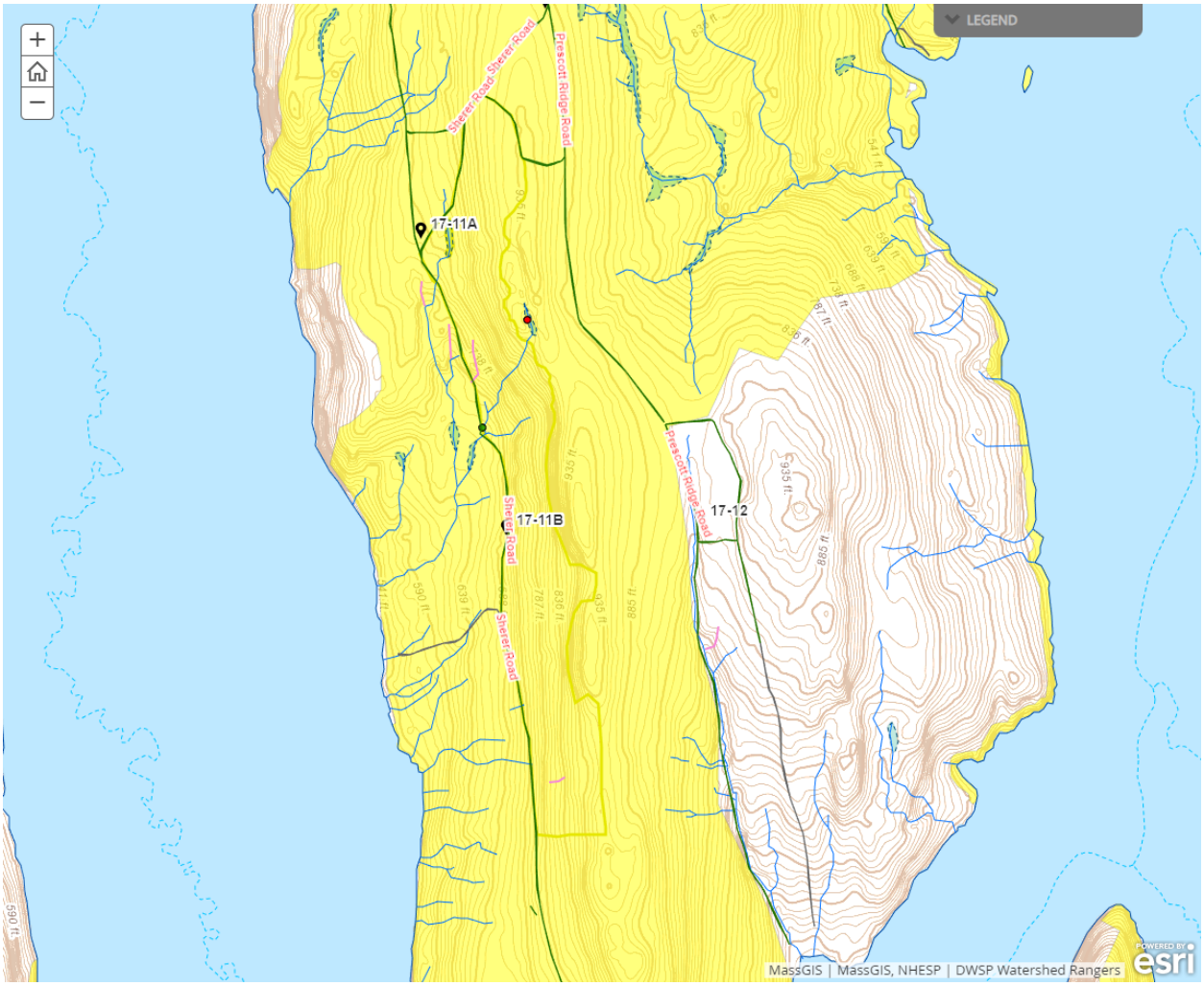
Wildlife Resources & Rare and Endangered Species

General Wildlife Comments:

Moose and deer are present but browse pressure appears to be low.

Comments on Rare Species/Habitats:

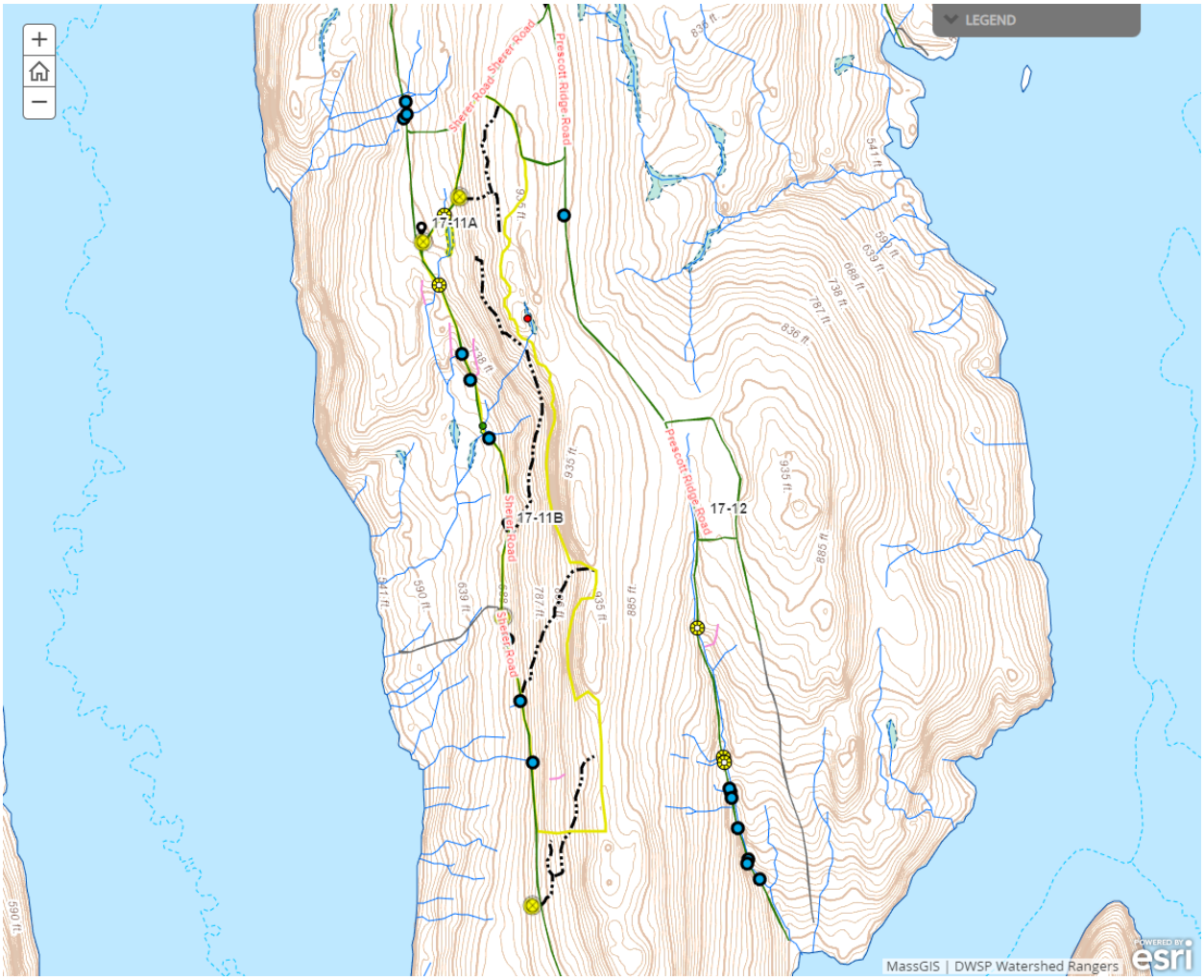
NHESP has determined that certain state-listed sensitive species or habitats may exist within the lot proposal area. To protect them from unnecessary disturbance, detailed information regarding affecting species and their locations in not included in this report. DWSP will coordinate with NHESP and follow recommendations to protect these species during the proposed activity.



Environmental Quality Engineering

Comments on EQ Issues:

There will be a crossing at a point way up on the hill where an old bulldozed road (the mapped skid road) crosses an intermittent outlet stream from a perched wetland/vernal pond up on top of the ridge. This is likely going to be dry when the lot is worked and not able to be sampled, but it will be bridged it if it is flowing.



Forest Access Engineering

Gravel needed: Yes

Landing work needed: Yes

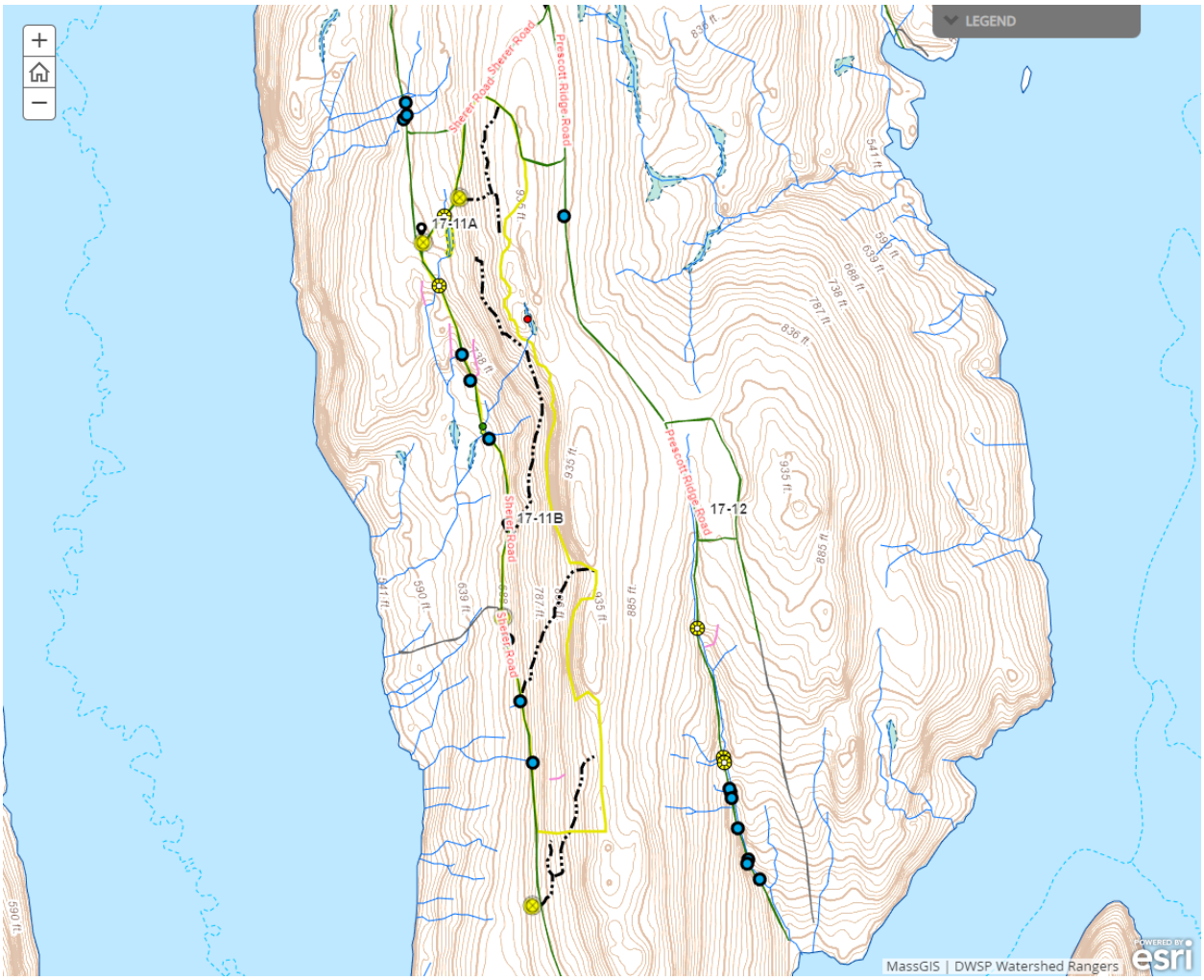
Culverts needed: Yes

Work needed on permanent bridges: No

Beaver issue: No

Further comment on access needs:

Northern landing will need an upgrade to accommodate a whole tree chipping operation. South landing may need gravel as well. Sherer road (south facing grade) could benefit from some smoothing and side ditching down to intersection 17-11B. One failed culvert just south of the short rock wall lined part of the road needs replacement, and a new culvert may be needed at the low point in this road south of the rock walled segment; trap rock may be another option to stabilize this section of road.



DWSP FY 2022 Forestry Proposals – Master Legend for story maps