

[Division of Water Supply Protection](#)

DCR Division of Water Supply Protection: FY2022 Forest Harvest Proposals

USING THIS INTERACTIVE STORY MAP

Each tab across the top of this page will open up an interactive map journal focused on one of the FY 2022 proposals. This year there are ten at Quabbin, five at Ware River, and six at Wachusett (the last tab on the right will open up the list of lots that cannot be fit across the top). As you scroll down in the frame on the left side, maps will update to highlight appropriate information relevant to the accompanying text section. The maps themselves can also be panned and zoomed using your mouse. *(If you are having issues with loading times or seemingly missing information, we have found that **clearing your browser cache** can help.)* A tab discussion archaeological review and protection of cultural resources during forestry activities has been included at the end.

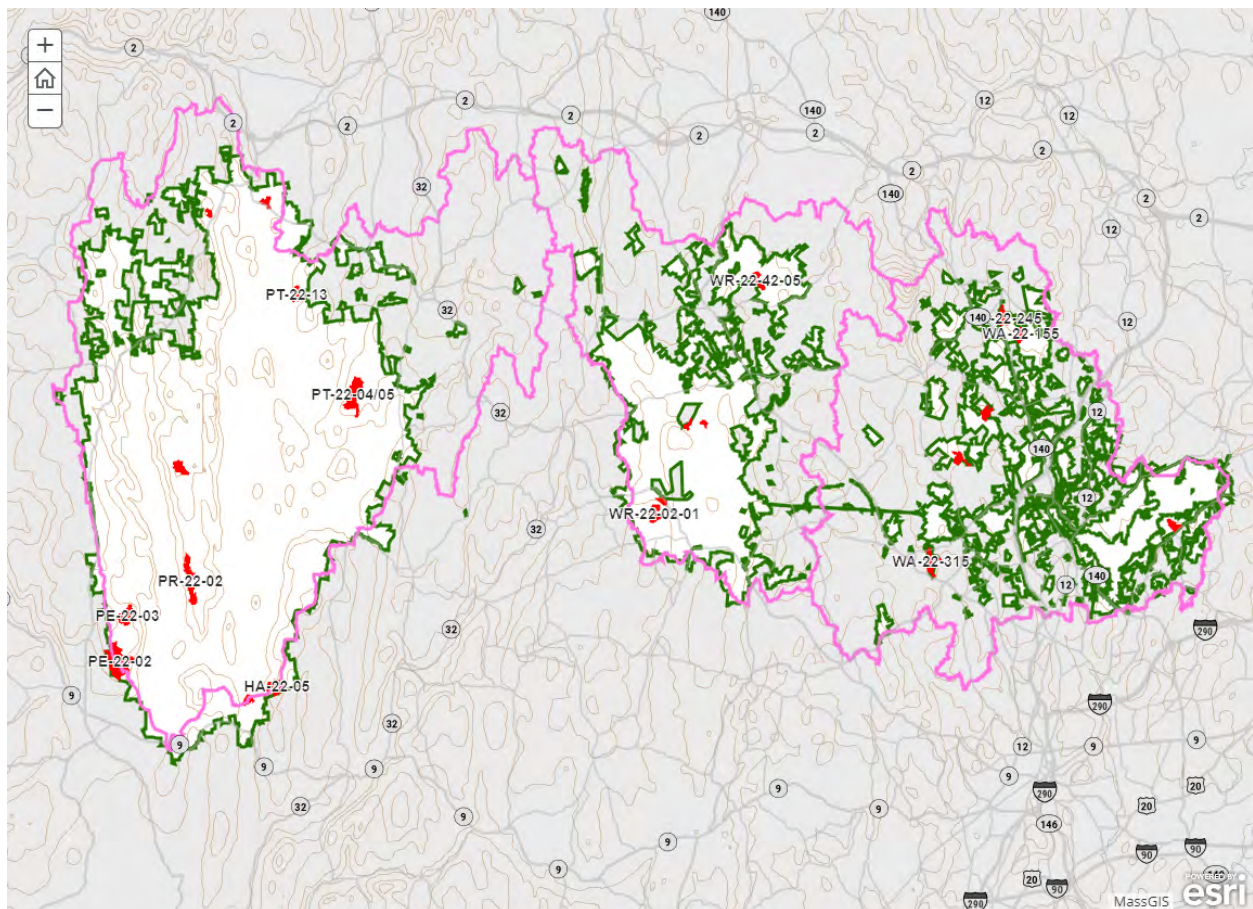
Public comment on these proposals is welcome and can be submitted online at this link: <https://www.mass.gov/forms/dcr-public-comments>. Comments may also be submitted by U.S. mail to

Department of Conservation and Recreation
Office of Public Outreach
251 Causeway Street
Boston, MA 02114

These proposals were presented at the Quabbin Watershed Advisory Committee meeting on June 28, 2021, and the Ware River Watershed Advisory on July 8, 2021. A link to this interactive web map application was also distributed to all advisory boards and committees, and letters were sent to individual Select Boards of affected towns.

Public Comments will be accepted until the close of business on Friday, August 6, 2021.

If you have any questions, please contact Natural Resources Specialist Brian Keevan at brian.keevan@mass.gov (preferred) or at (413) 213-7948.



DWSP Forestry and Cultural Resources

WATERSHED PROTECTION FORESTRY

[The Division of Water Supply Protection](#) (DWSP) is mandated to protect drinking water resources for over three million Massachusetts residents. DWSP owns and manages over 100,000 acres of land within the Quabbin Reservoir, Ware River, Wachusett Reservoir, and Sudbury Reservoir watersheds. Forests on these lands serve as a living, protective filter, producing high quality water in our streams and reservoirs. DWSP is committed to maintaining a watershed protection forest cover on the vast majority of its lands, and has determined that the most resilient and protective forest is one that is vigorously growing and comprised of a broad diversity of tree species and ages. The Division's long-term objective is to steadily transition today's mostly even-aged forest into a forest with more balanced proportions of young, middle-aged, and older trees of a variety of native species. These conditions have been shown to promote and enhance native plant and wildlife biodiversity. DWSP's working hypothesis is that a diverse forest structure will also promote resiliency in the event of large and small scale natural disturbances such as increasingly severe weather events, disease outbreaks, and insect pest infestations.

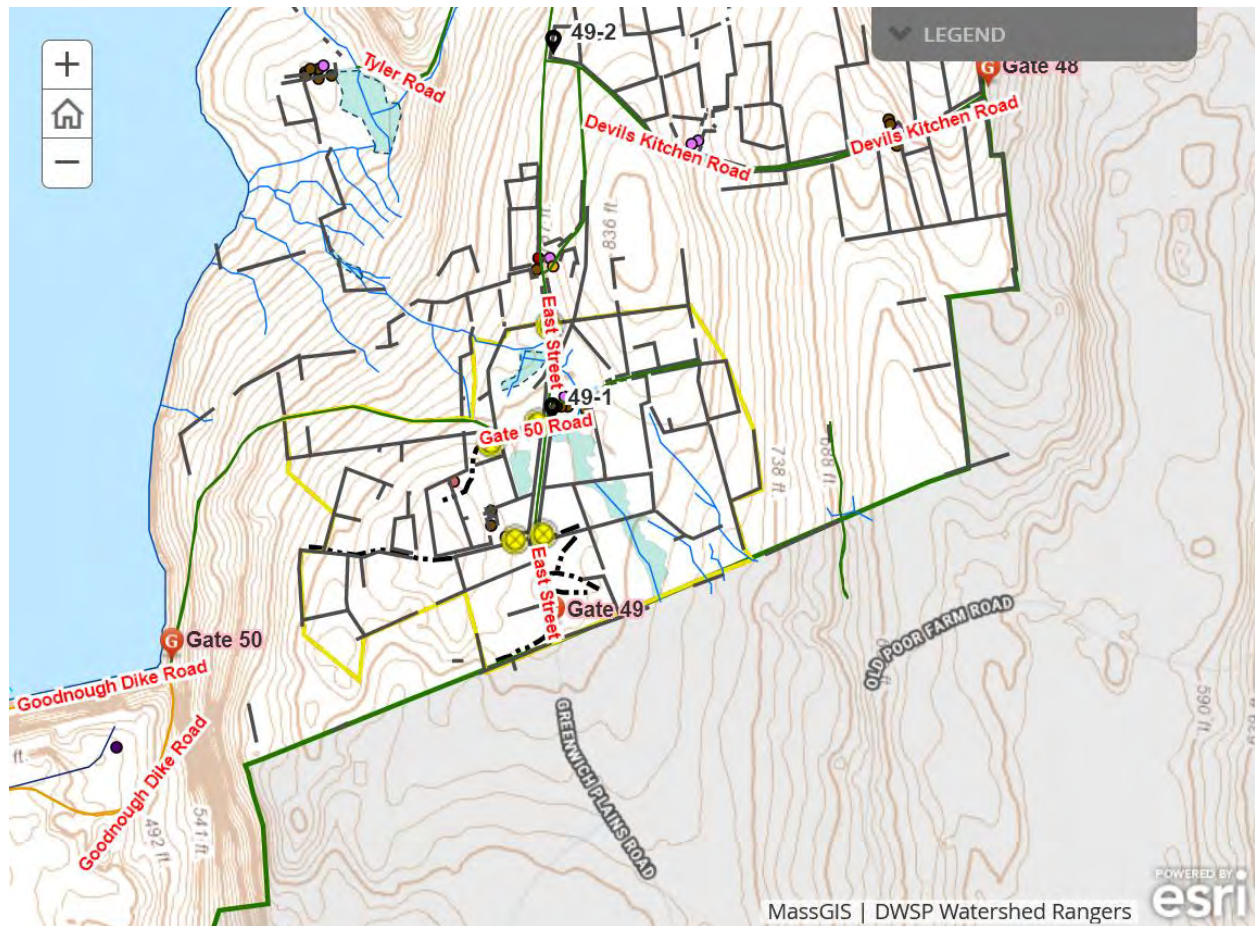
For full details on DWSP watershed land management please see the:

[2017 Land Management Plan](#) (opens a pdf)



DWSP FORESTRY PLANNING AND REVIEW PROCESS

[DWSP Foresters](#) are responsible for the design, preparation, implementation, and oversight of forest management operations. Each year they prepare a number of timber harvest proposals which are reviewed for compliance with Land Management Plan goals and for protection of environmental resources by DWSP professionals in Natural Resources, Environmental Quality, and Watershed Management. Cultural resource review is completed by DCR's Archaeologist. Following this process, these proposals are made available for public comment as presented here.



Cultural Resource Protection and DWSP Forestry Activities

Cultural resource review has been a standard part of the internal review of DCR forestry activities for over two decades. In addition to overseeing historical preservation activities throughout the DCR Parks system, the DCR archaeologist reviews the areas we propose to harvest for proximity to known or potentially sensitive sites, both historic and pre-Contact.

Feedback is often fairly standard. If there are known to be significant historic or archaeological resources documented within the proposed project parcel, then the lot will have restrictions to be operated when the ground is dry, frozen, or can support harvesting equipment. A standing requirement is that any cultural resource features located before or during the forestry project will be protected according to guidelines set forth in the current DWSP's Land Management Program and indicated on harvest maps accordingly. And foresters are asked to flag, protect, photograph, and map any cultural features and contact DCR staff archaeologist if there are any questions or concerns.

In most cases on DWSP properties, the cultural resource sites are easily identified as recent historical activities associated with agricultural land clearing and farming by European colonists. Stone walls, cellar holes, foundations, and wells are routinely encountered by foresters as they walk DWSP's watershed forests. Some of these structures are well-documented, especially at Quabbin, while others would require research to determine original owner/builder, last known owner, etc. Systematic surveys were conducted of all the known historical sites at Quabbin by researchers in the 1990s, using property maps created when the lands were surveyed and taken for construction of the reservoir. Much of this information is available upon request at the Quabbin Visitor Center in Belchertown.

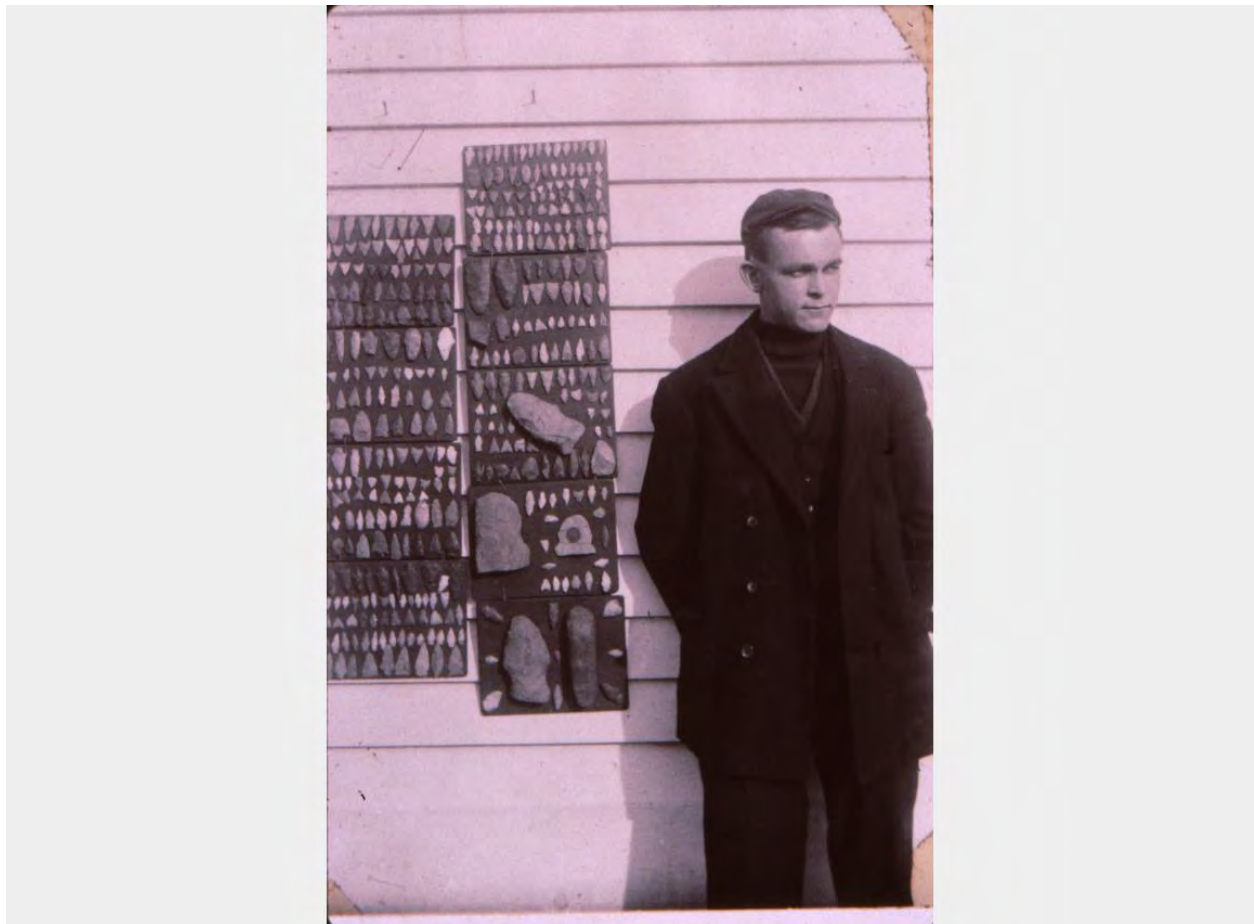


Protection of Sensitive Sites

These lands had been occupied for thousands of years before the influx of Europeans in the 17th century and the reworking of the landscape to suit their agricultural way of life. Plowed soils often revealed artifacts from pre-Contact land use, such as the tools and weapons collected by this enthusiast from pre-Quabbin Enfield.

DCR's archaeologist routinely consults Massachusetts Historical Commission records to determine proximity of proposed activities to known protected sites such as villages and burial sites. Models are also consulted that use ground conditions such as topography and distance to water sources to estimate the potential locations of other pre-Contact sites such as seasonally occupied camps.

In an effort to protect this information it will not be included in the public documentation for the forestry proposals. DWSP foresters abide by all recommendations pertaining to protection of historic and pre-Contact cultural resources.



Ongoing Field Mapping of Cultural Resources

Known and visible features and sites are mapped using GIS and are incorporated into editable digital field maps. Mapping apps for smartphones and tablets have revolutionized the ability for foresters to verify locations and add previously unmapped features right in the field. This technology aids immensely in planning harvesting operations.

At Ware River, Wachusett, and Sudbury no modern systematic surveys have been conducted, although the foresters routinely map stone walls and other features and do consult property sheets that show locations of extant homes and outbuildings at the time of land takings.

Most of what you will read in these individual lot proposals will be the foresters' assessments of visible cultural features in the area, and these are nearly always stone features related to colonial and post-colonial land use.



Quabbin Harvest Proposal PR-22-02

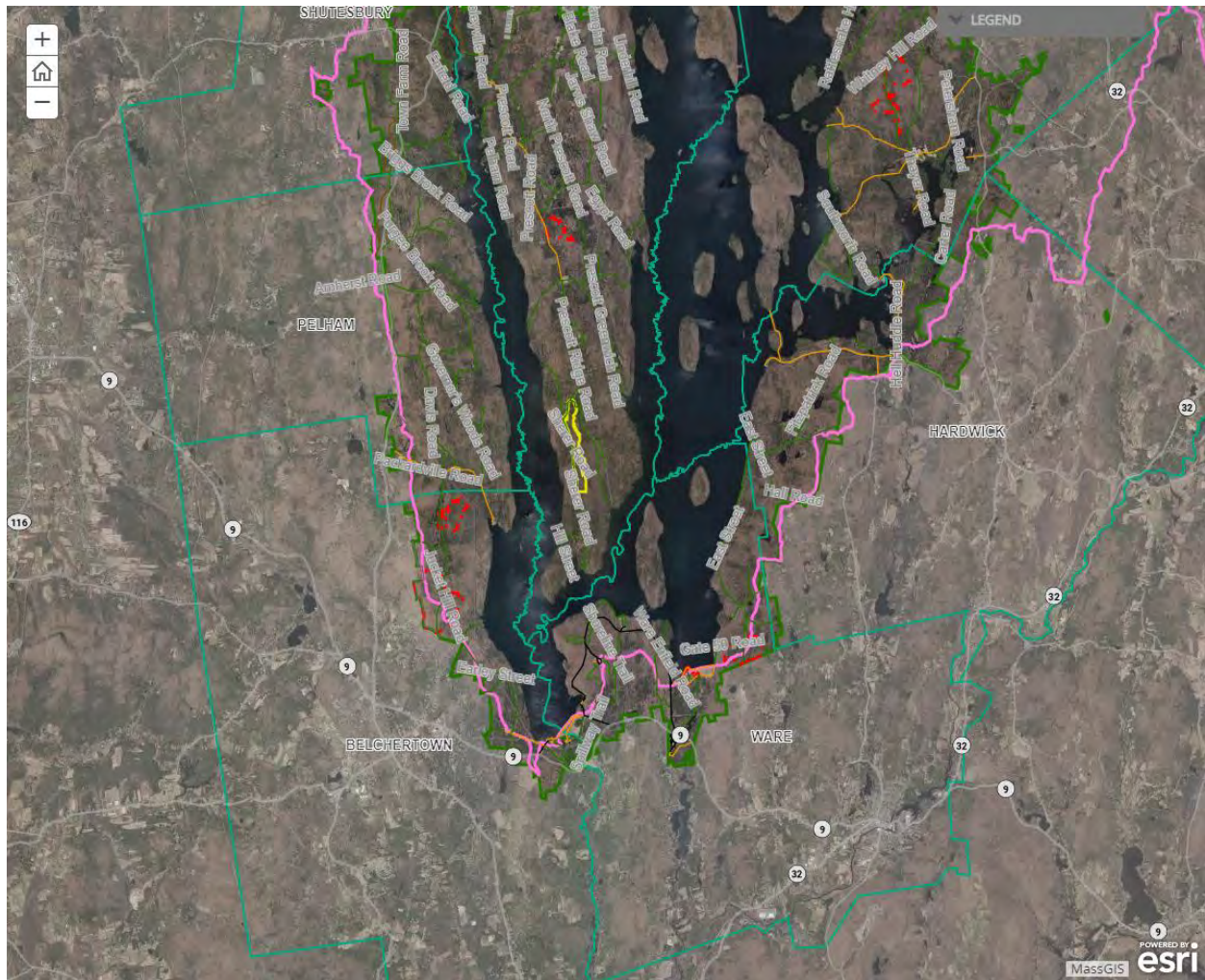
Proposal Goals

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

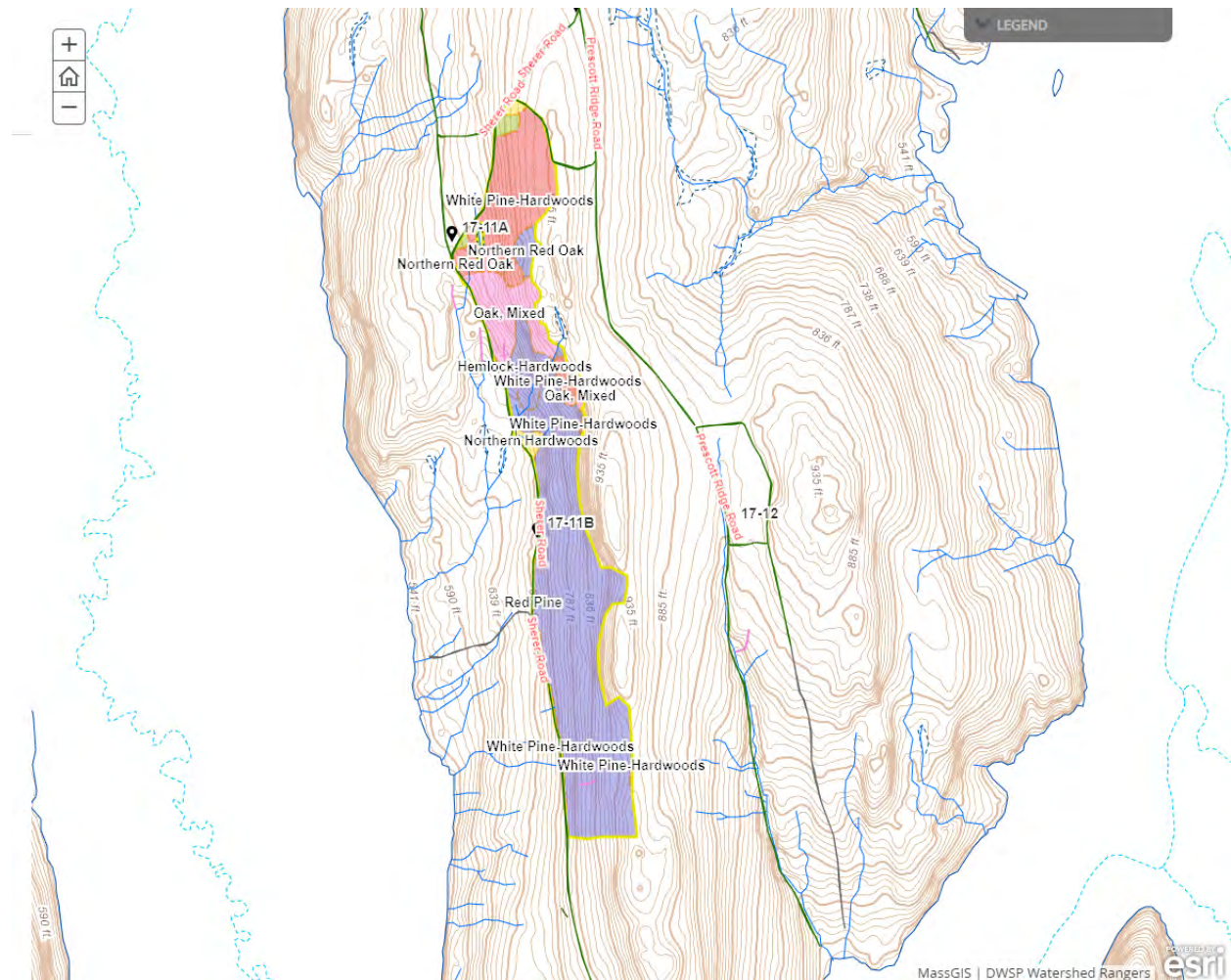
Description of forest composition/condition:

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

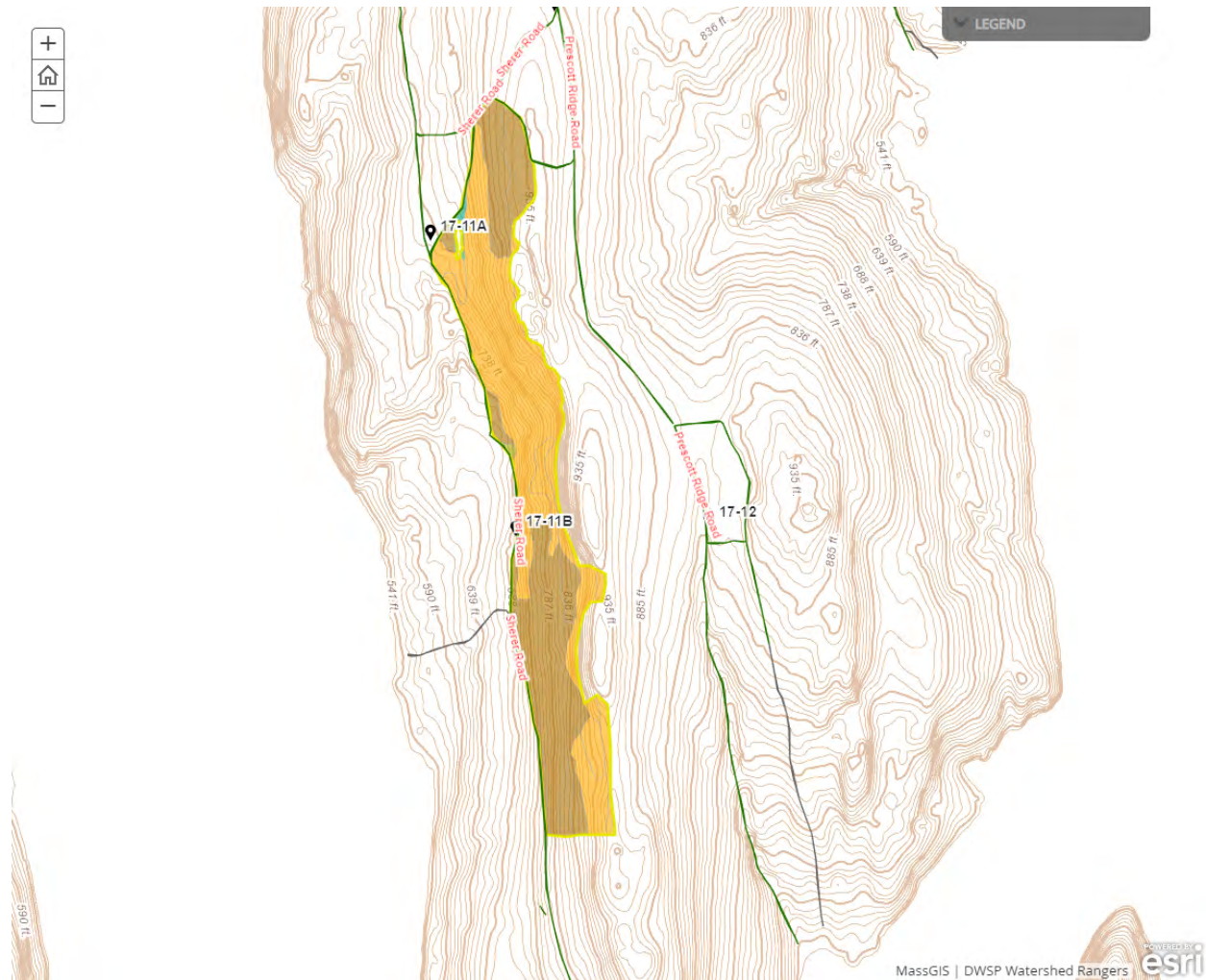
Drainage Class	%
Excessively Drained	0
Well Drained Thin	65
Well Drained Thick	32
Moderately Well Drained	1
Poorly to Very Poorly Drained	1

Well drained thin - Chatfield-Hollis Complex; rocky

Well drained thick - Canton-Chatfield-Hollis Complex; rocky

Moderately well drained - Extremely stony Newfields fine sandy loam

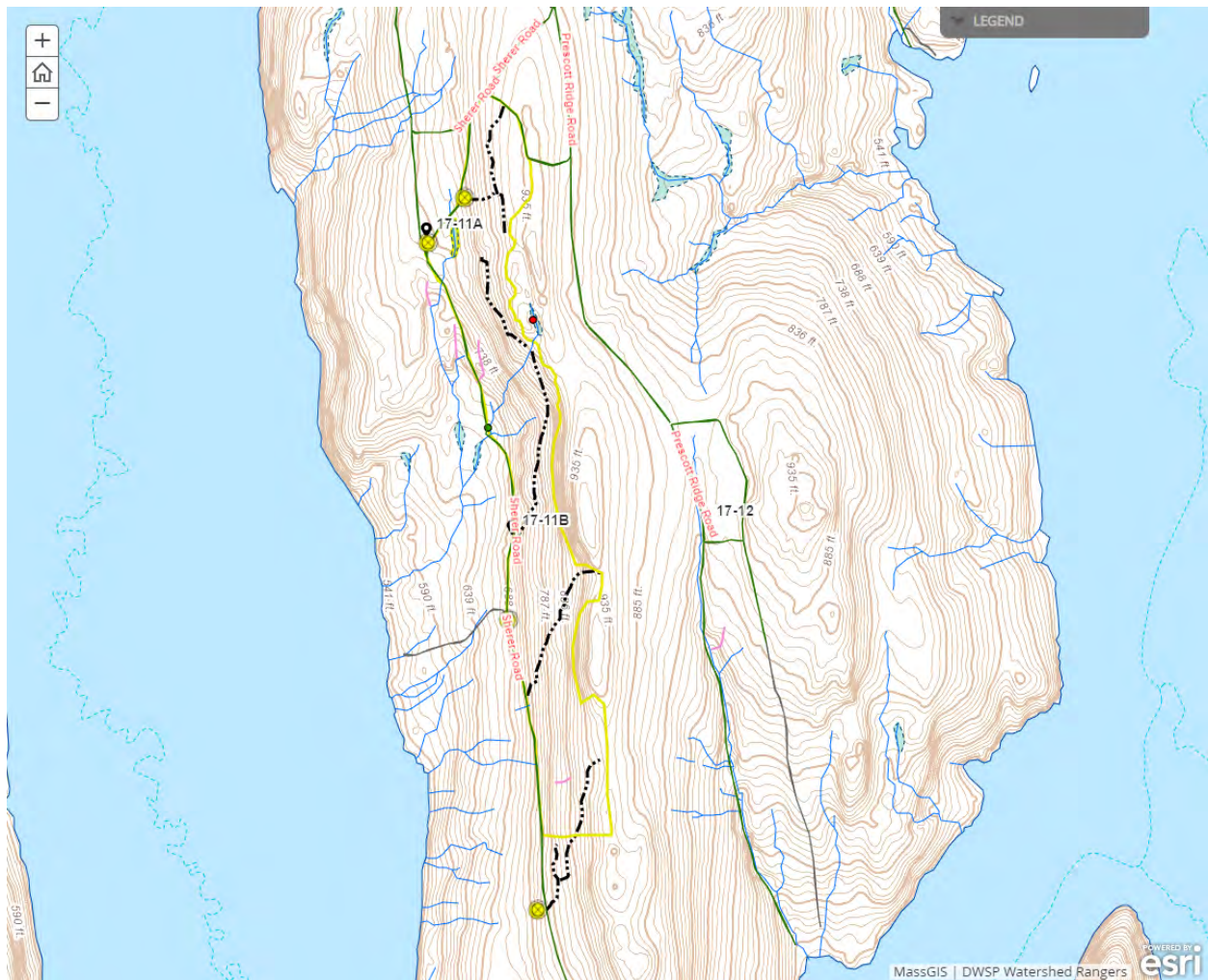
Poorly drained - Whitman extremely fine sandy loam muck



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.

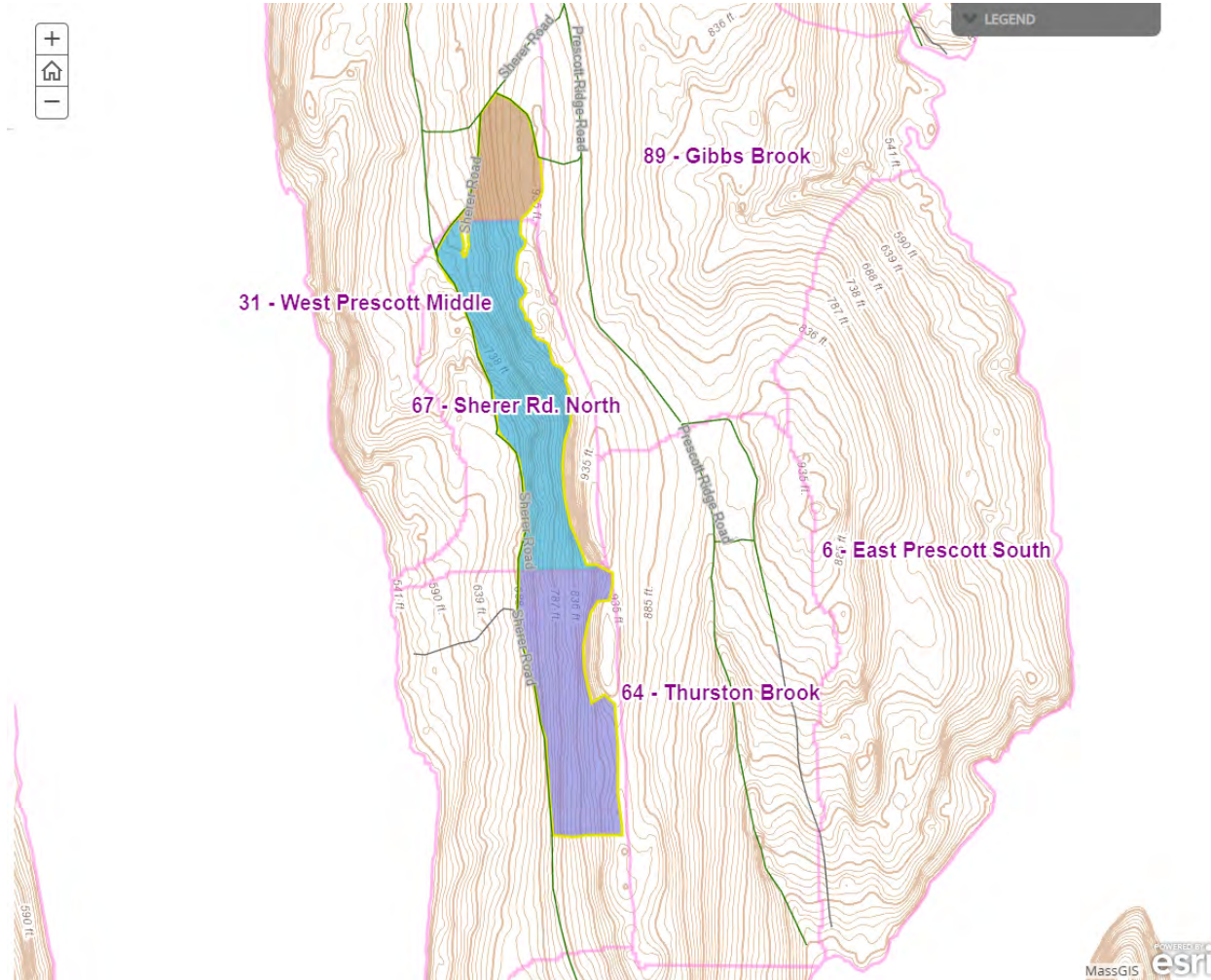
The proposed silviculture will initiate forest diversity within the area and increase continuous diversification at the compartment level. Diversification should build resiliency in warding off the effects of climate change, most notably severe weather (hurricane).



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

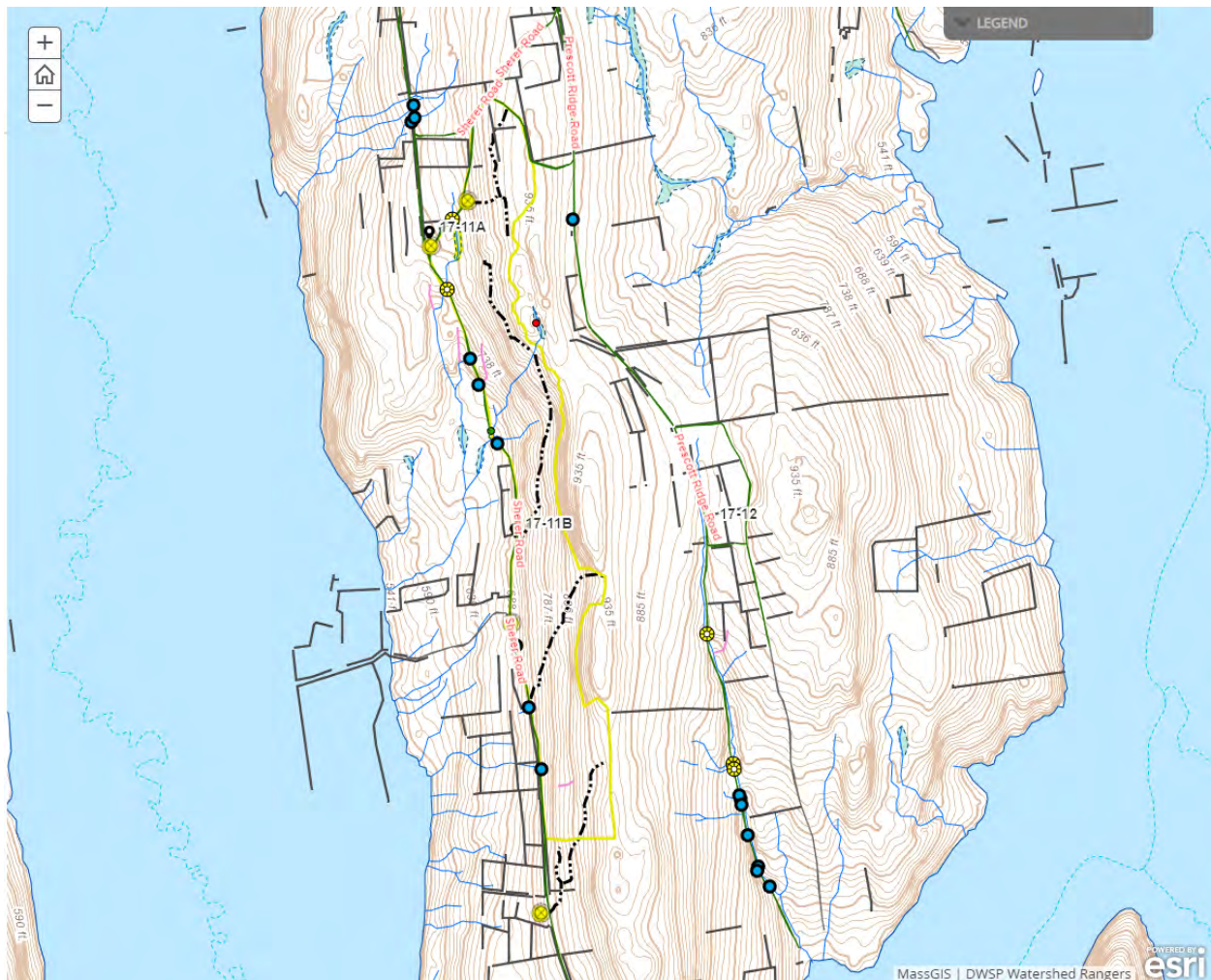
Forwarder required: **No**

Feller/processor required: **No**

Steep slopes present: **No**

Comments on harvesting limitations:

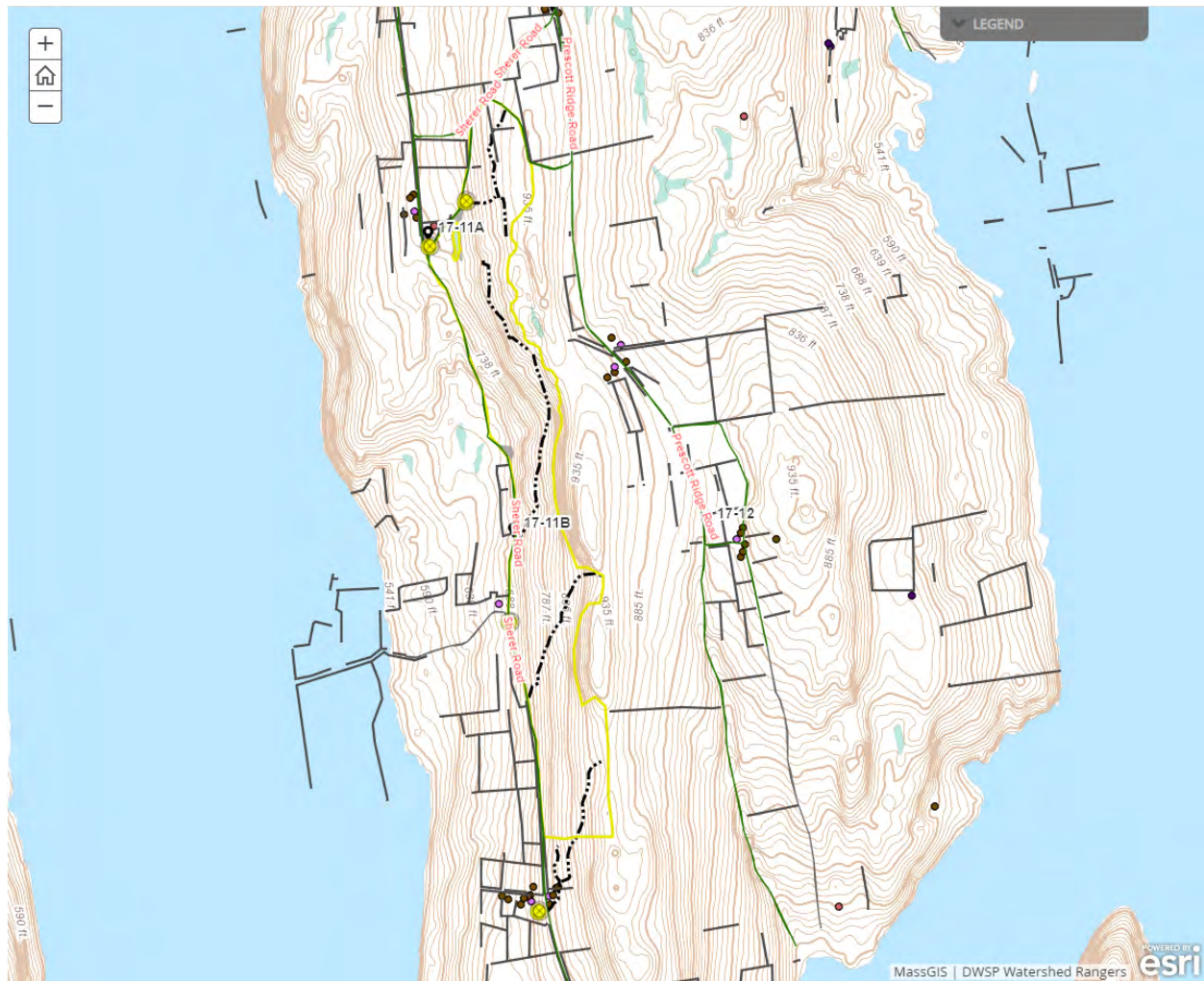
Given the rough white pine located on the northern 1/3 of the area and the lack of a softwood round pulp market, a whole tree chipping operation would best fit there. If possible other sections of the area could be done more conventionally with a forwarder and feller/processor.



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).



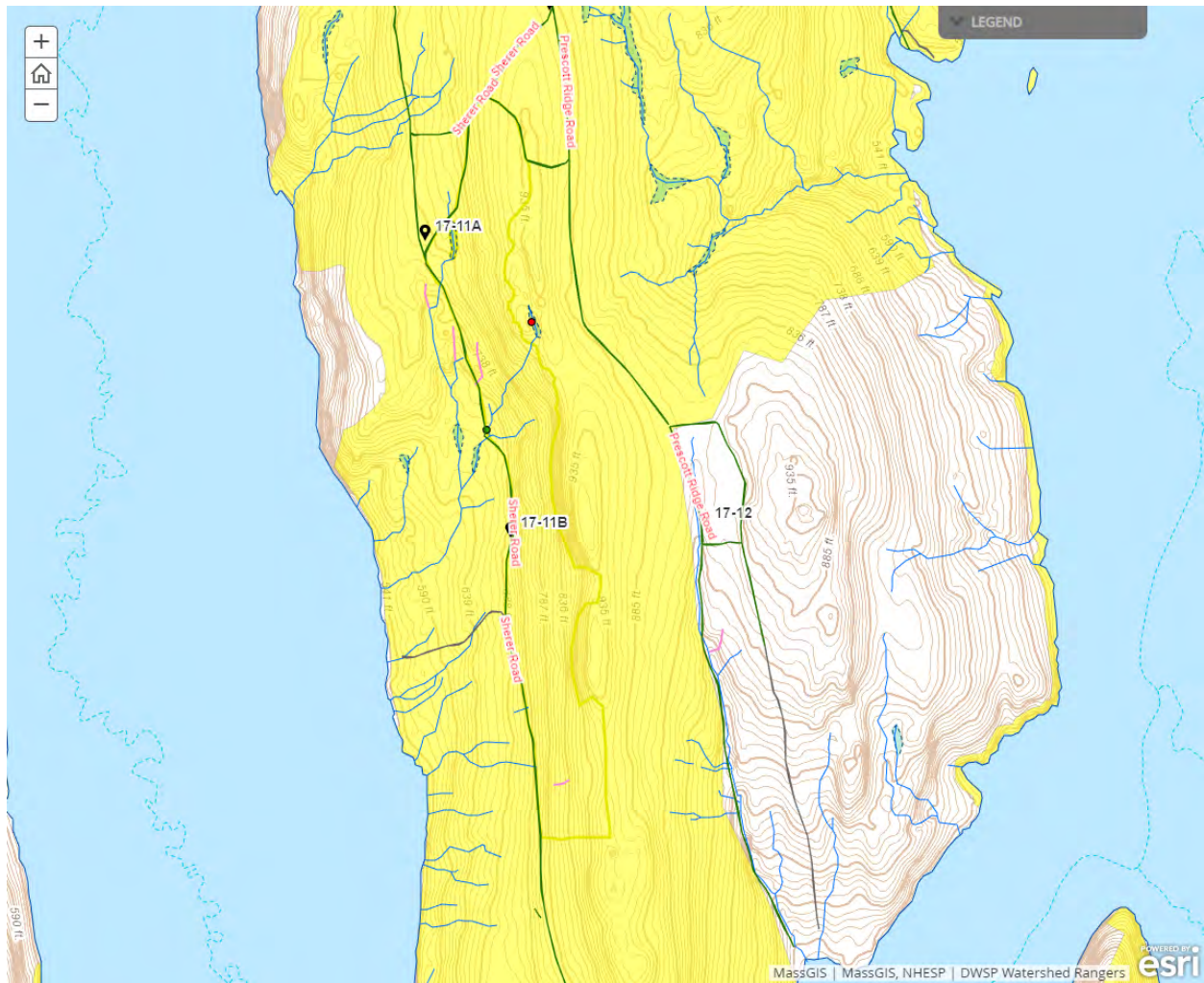
Wildlife Resources & Rare and Endangered Species

General Wildlife Comments:

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

Comments on Rare Species/Habitats:

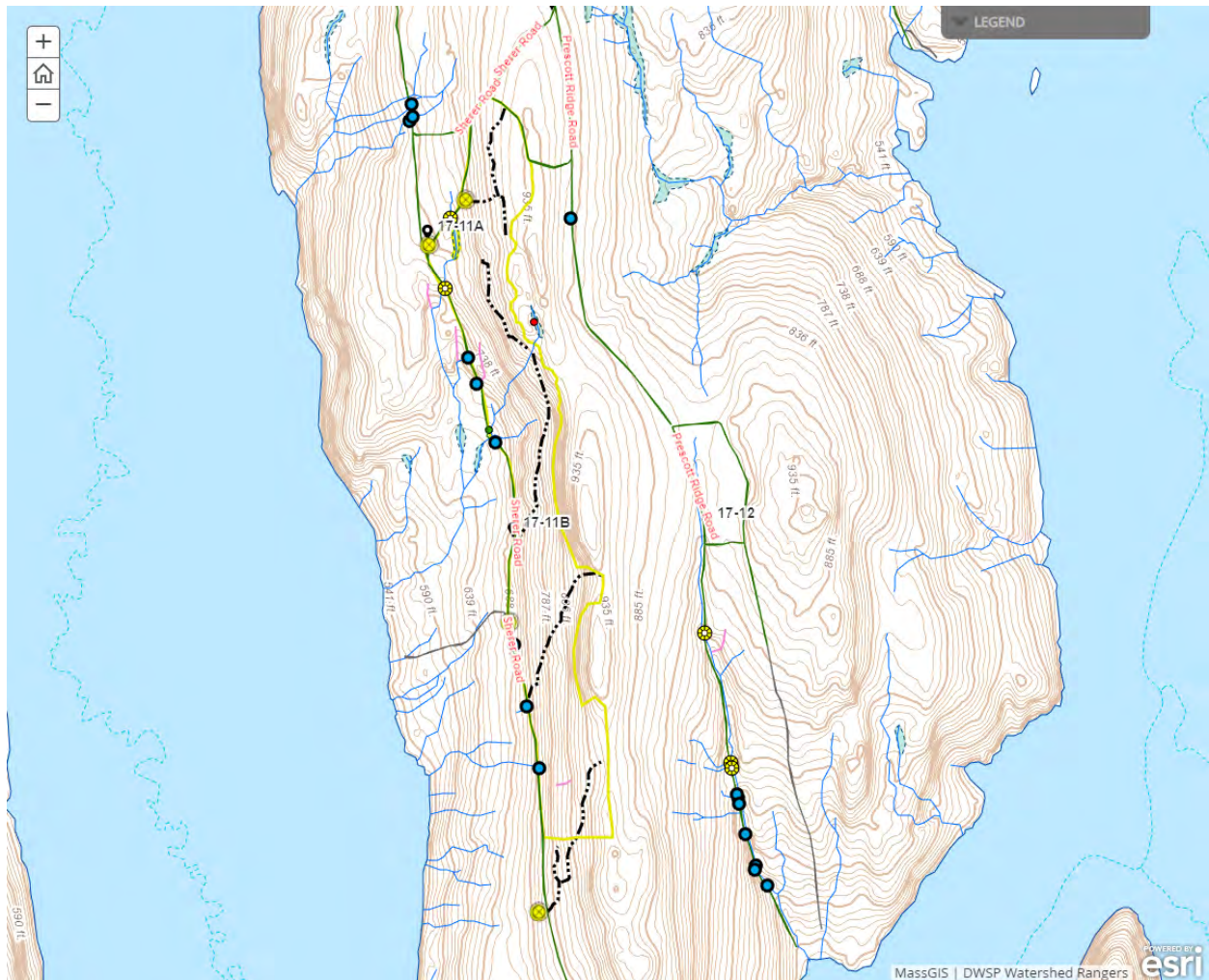
NHESP has determined that certain state-listed sensitive species or habitats may exist within the lot proposal area. To protect them from unnecessary disturbance, detailed information regarding affecting species and their locations is not included in this report. DWSP will coordinate with NHESP and follow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



Forest Access Engineering

Gravel needed: Yes

Landing work needed: Yes

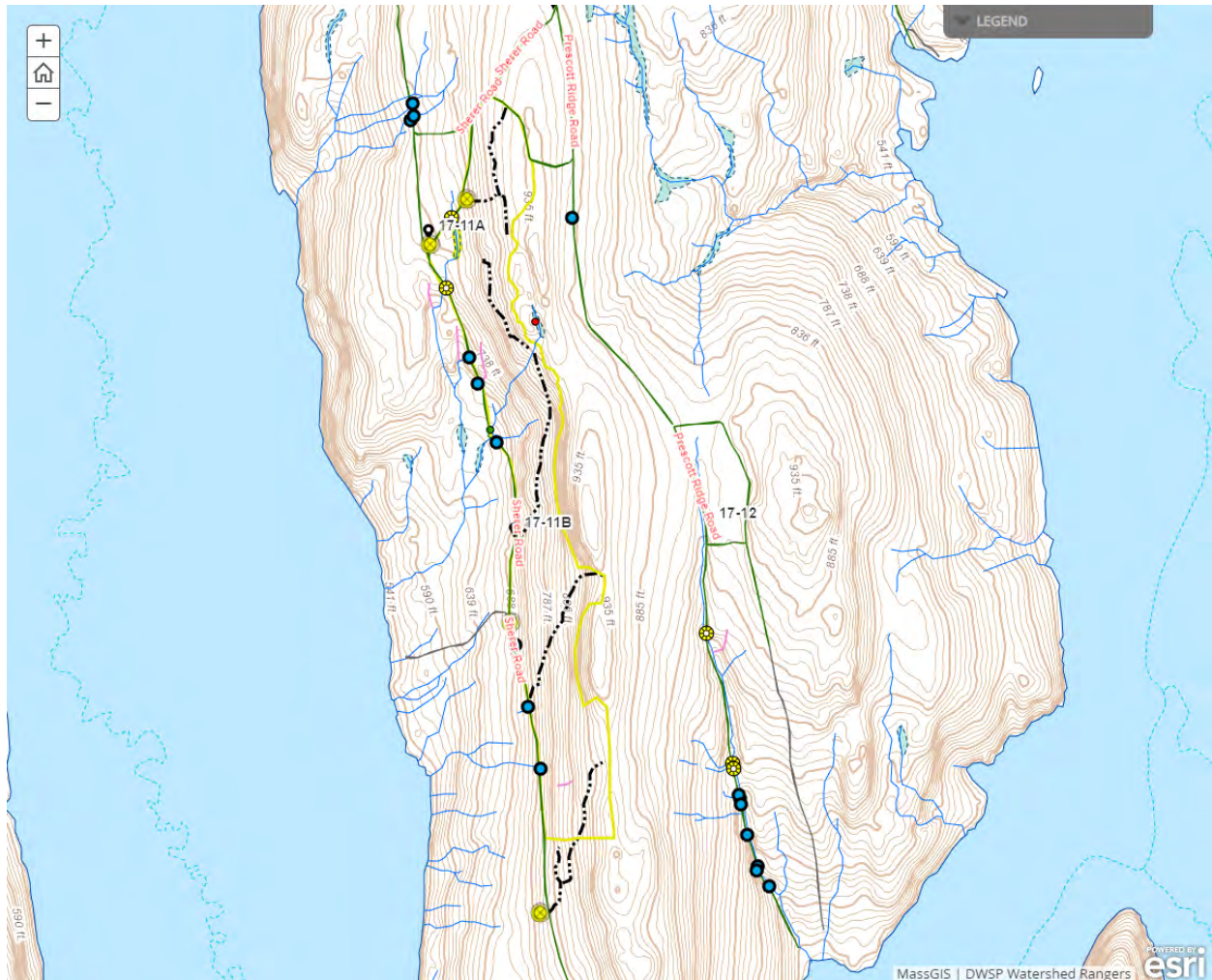
Culverts needed: Yes

Work needed on permanent bridges: No

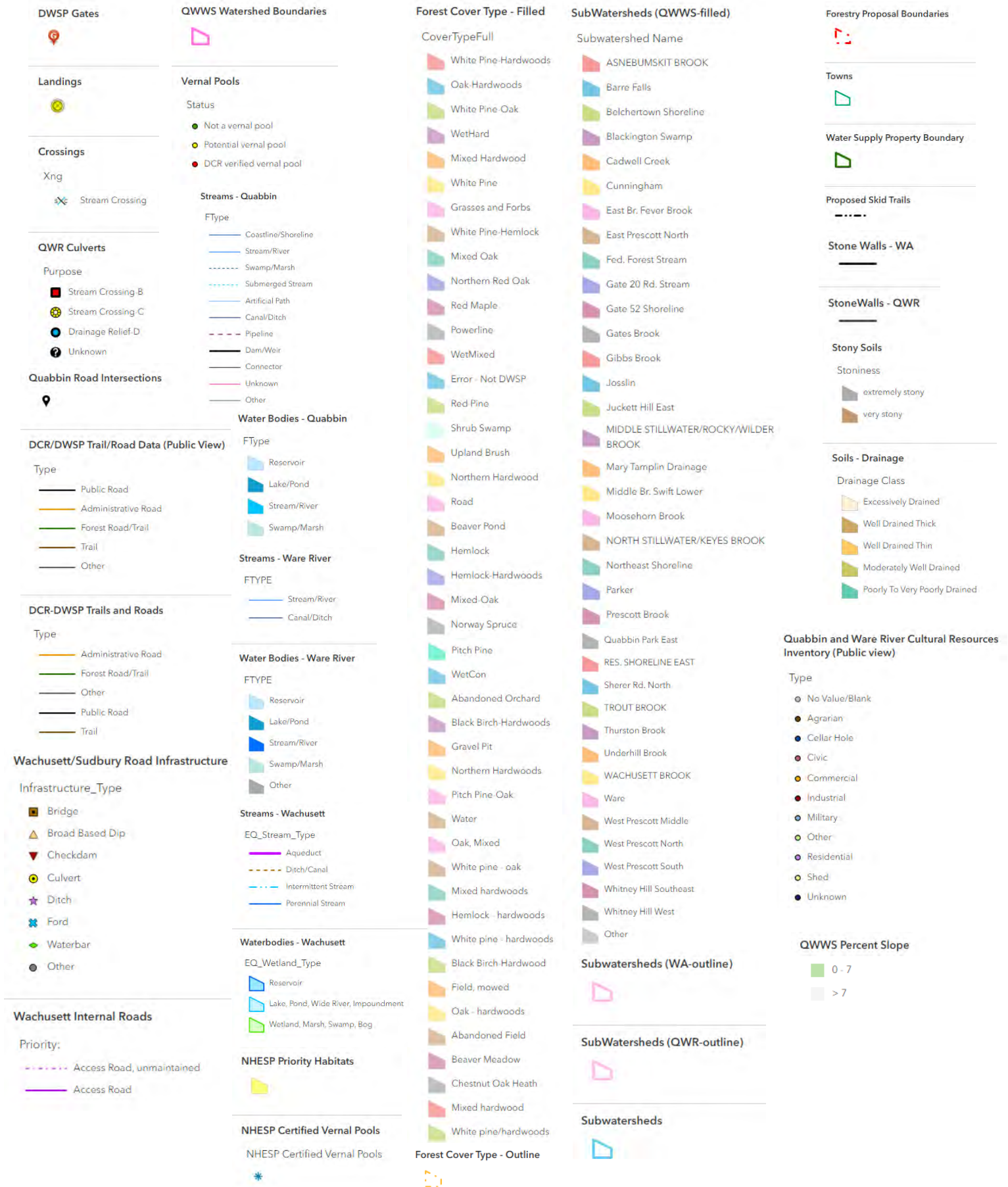
Beaver issue: No

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



Quabbin Harvest Proposal PR-22-11

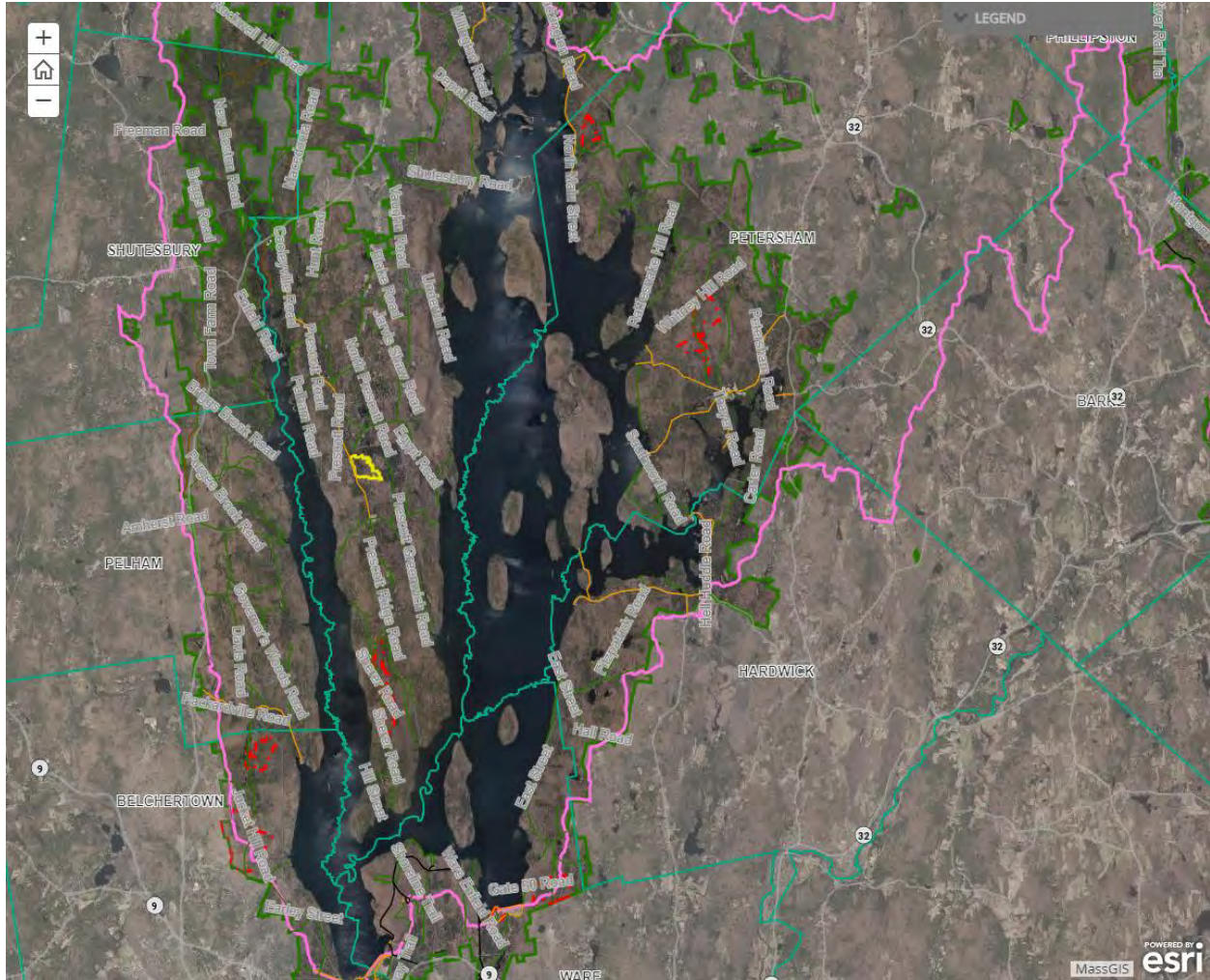
Proposal Goals

Continuing expansion of existing structural diversity and overall complexity is the primary purpose of the proposed harvest.

Proposal Location

The area is located on the east side of Prescott Road (Gate 17) just south of intersection 17-8 (Prescott Road and Herman Powers Road). In addition to the gate 17 road, the area is bounded to the north by the group selection portion of timber harvest 3008, to the east by Prescott brook (and accompanying wetlands) and steep terrain, and south by an ephemeral brook and the north boundary of timber harvest 3129.

Total Acres: 72



General Description

	Overstory Type(s)	Acres
Dominant	Oak - hardwoods	54
Secondary	White pine - hardwoods	18
Other		

	Understory Type(s)
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Dominant	Tree seedlings/saplings dominate site
Secondary	Dry site - blueberry/huckleberry

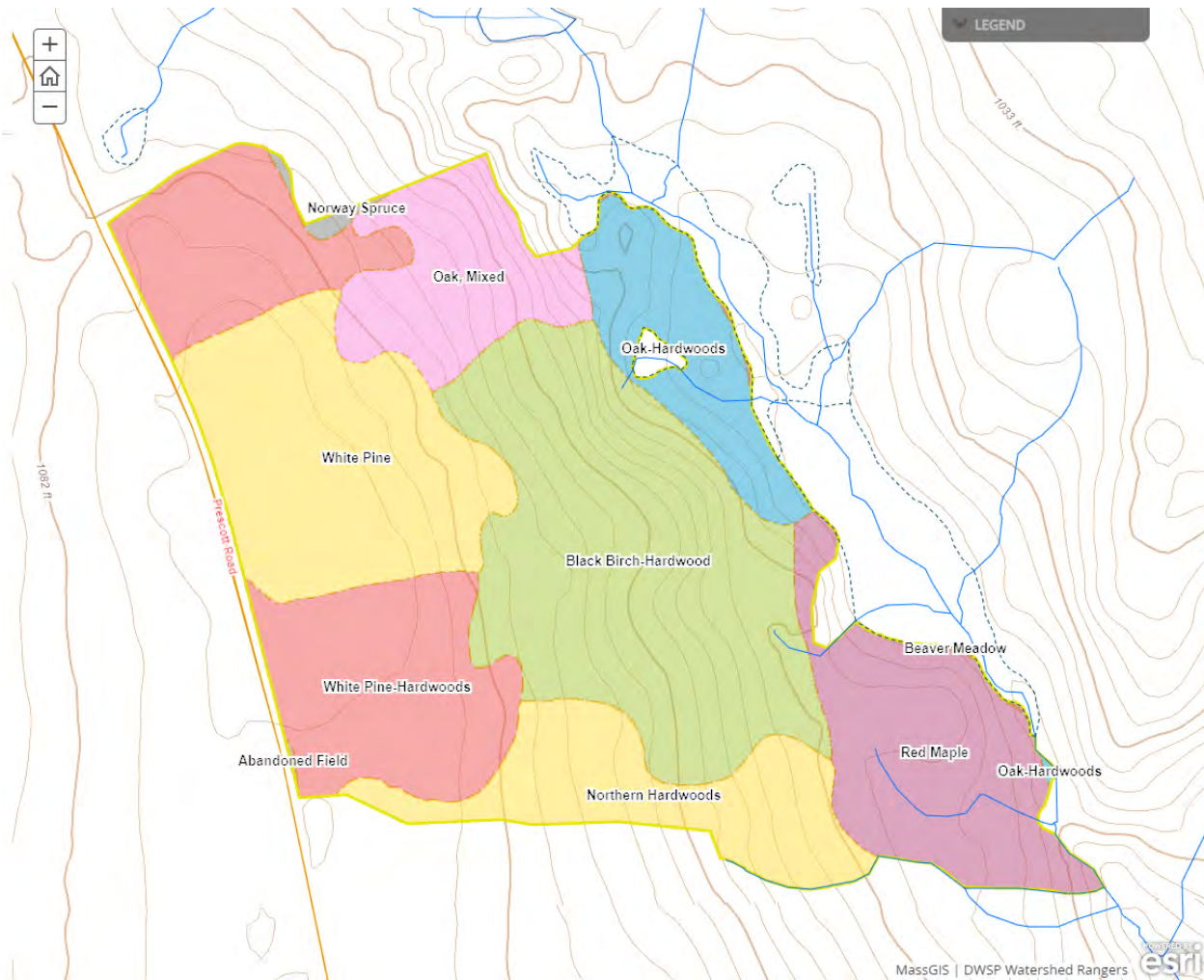
Description of forest composition/condition:

Overstory composition is two aged multi-species. However, the two aged structure is skewed to the west 1/3 which is growing an overstory of white pine arranged in a single tree to fairly large group pattern followed by a mid-canopy of black birch and white pine small poles. The mid-canopy was triggered by a 1990 thinning and 2001 shelterwood prep harvest. Plantation red pine was the primary product removed by those operations.

In comparison, the eastern 2/3 has had less silvicultural work, only a 1980 thinning which treated roughly 75% of the proposal area with the remainder in original condition. Most of the regeneration is small pole size black birch limited to the skid trails. Overstory is dominated by sawtimber sized red oak in the area's northern and central portions. In upland locales the red oak shares crown space with black, white, and scarlet oaks. The oak component experienced light mortality from the recent gypsy moth caterpillar infestation. In the southernmost portion of the area oak dominance decreases and is joined by a more northern hardwood composition of white ash, red maple, sugar maple and hickory with a similar mid-canopy.

Assessment of Terrestrial Invasive Species:

Generally invasive presence is light, however the landing is located in an area previously used as an old farmstead. Amid the old farm site exists fairly high densities of barberry, honeysuckle and to a lesser extent (but no less a concern) Asiatic bittersweet. Main concern is additional spread with silvicultural work.



Soils

Drainage Class	%
Excessively Drained	0
Well Drained Thin	0
Well Drained Thick	95
Moderately Well Drained	5
Poorly to Very Poorly Drained	0

There is a small nested wetland in the area's northeast corner. There are several intermittent/ephemeral brooks that flow into Prescott brook. A potential vernal pool in the southwest corner was determined to be not a viable pool. A small spring/seep was found 700 feet east of proposal area's existing landing.



Silviculture

Acres in Intermediate cuts: **0**

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

Acres in Regeneration cuts: **16**

Average regen opening size: **2**

Maximum regen opening size: **4**

Description of advance regeneration in proposal area:

Western 1/3 of area is well regenerated with small pole-sized black birch and white pine. Regeneration is scarce in the remainder, limited to low density of black birch sapling/small poles.

General comments on silviculture proposed:

Continuing understory development and balancing structural distribution is the main goal of the proposed silviculture. This will be accomplished by creating canopy openings that will either further development of existing regeneration or trigger a new forest age class. In areas of existing regeneration (western 1/3) focus should be on additional release of well-formed white pine aggregates. This will mainly be accomplished by single tree/small group removal of overstory white pine; but will also include removing well formed black birch growing stock, which should be done given the species watershed wide ubiquity (particularly in the younger age classes). Secondary priority will be the further release of acceptable black birch growing stock and overstory removal of mature white pine. Generally, the western 1/3 will receive 6 acres of canopy opening.

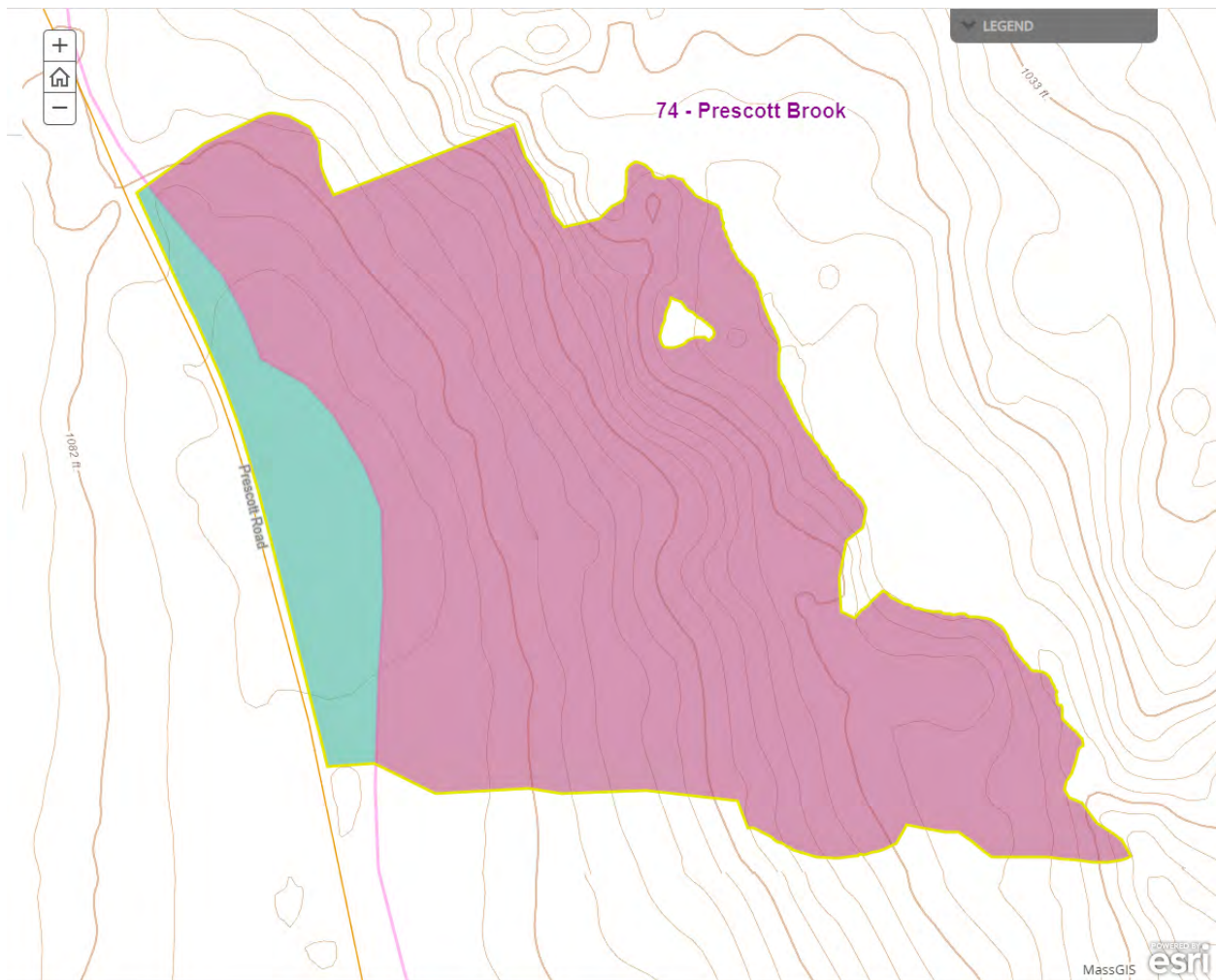
Where new forest needs to be established (eastern 2/3); openings, where possible, will be placed in locales that have higher stocking of mixed hardwood and/or lower quality/dry-site oak. Small or no openings will be placed in locales with higher acceptable northern hardwood overstory stocking. The eastern 2/3 will likely receive about 10 acres of canopy opening.



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
74 (Prescott Brook)	1694	56	376	65
27 (West Prescott North)	1054	8	255	7

Proposed harvesting will not exceed the 25% threshold.



Harvesting Limitations

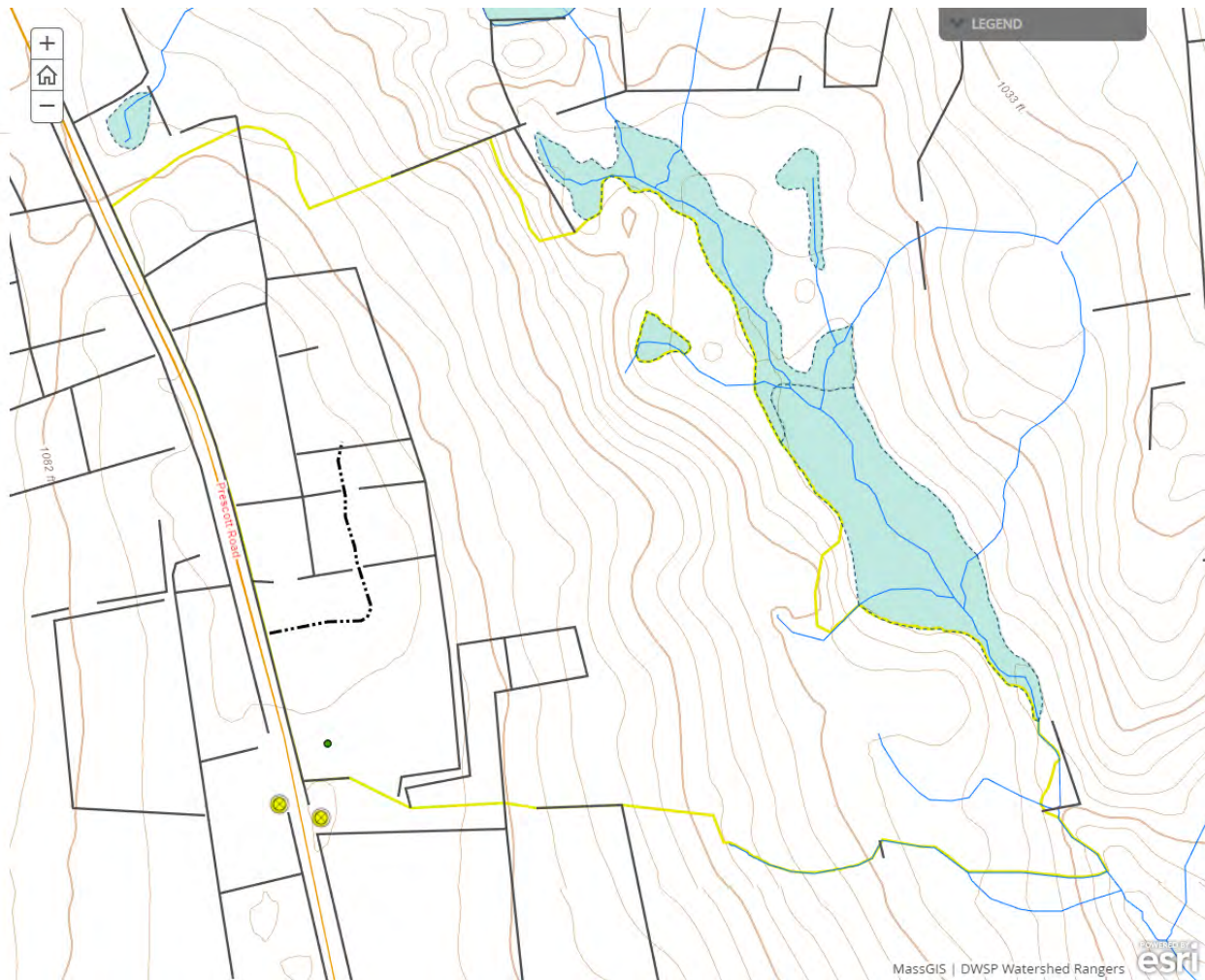
Forwarder required: **No**

Feller/processor required: **No**

Steep slopes present: **No**

Comments on harvesting limitations:

No specific equipment limitations expected on this proposal.



Cultural Resources

Comments on Cultural Resources:

Many stone walls traverse the areas in the western 1/3 (along the gate 17 road), relics of the land's agrarian past.



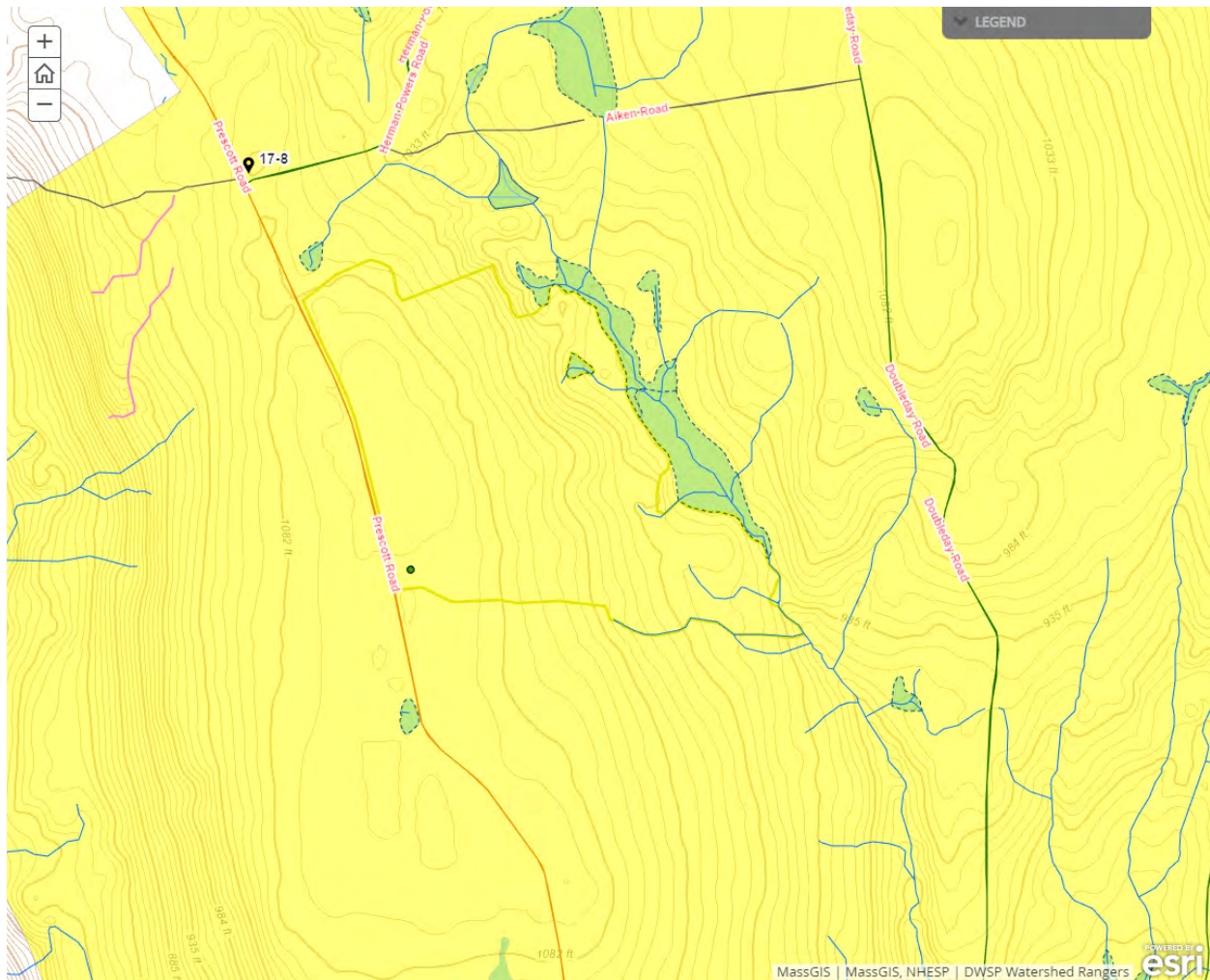
Wildlife Resources & Rare and Endangered Species

General Wildlife Comments:

Ordinary beaver activity present within the Prescott brook wetland complex.

Comments on Rare Species/Habitats:

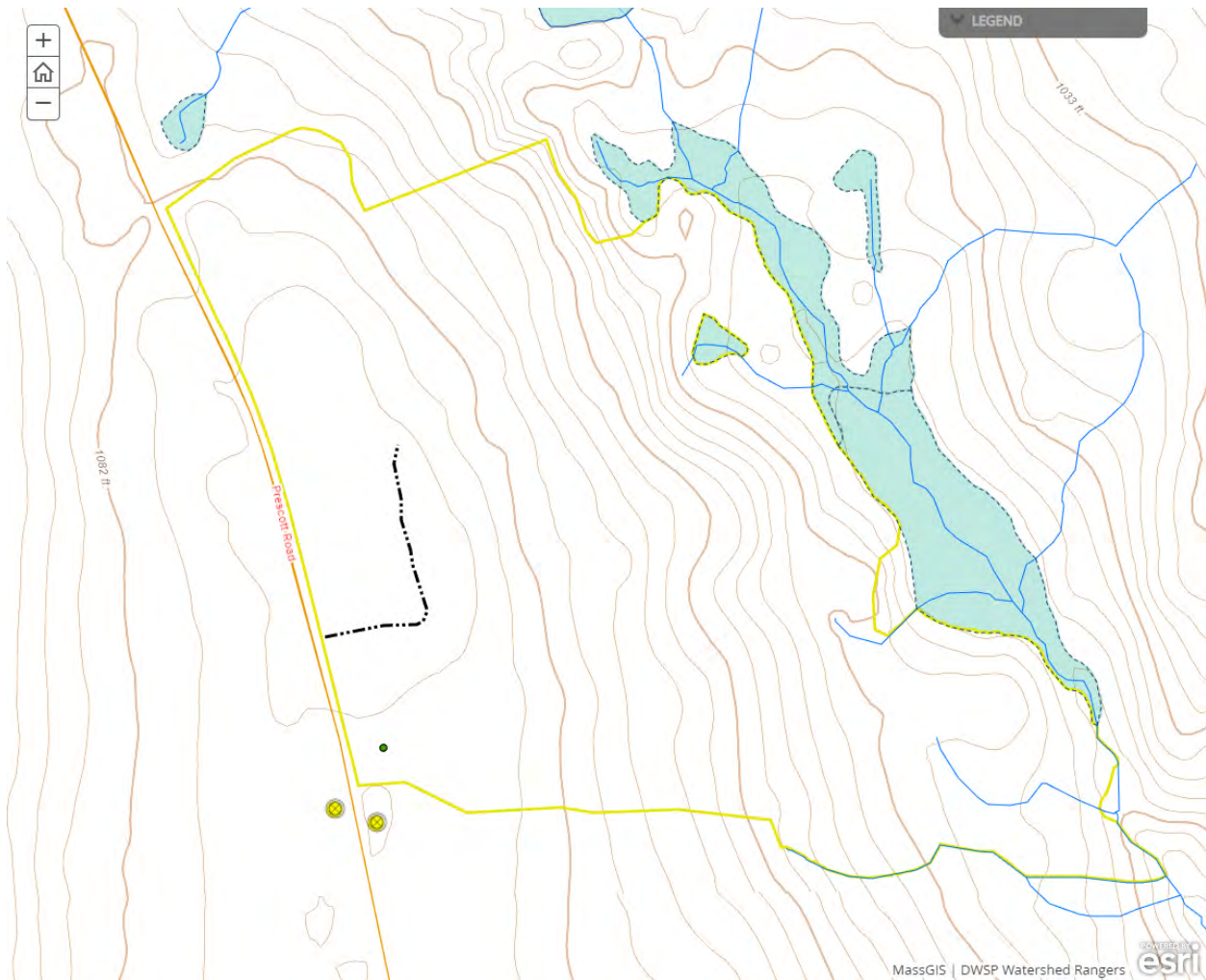
NHESP has determined that certain state-listed sensitive species or habitats may exist within the lot proposal area. To protect them from unnecessary disturbance, detailed information regarding affecting species and their locations is not included in this report. DWSP will coordinate with NHESP and follow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



Environmental Quality Engineering

Comments on EQ Issues:

No EQ concerns because no stream crossings or culvert work are identified.



Forest Access Engineering

Gravel needed: No

Landing work needed: No

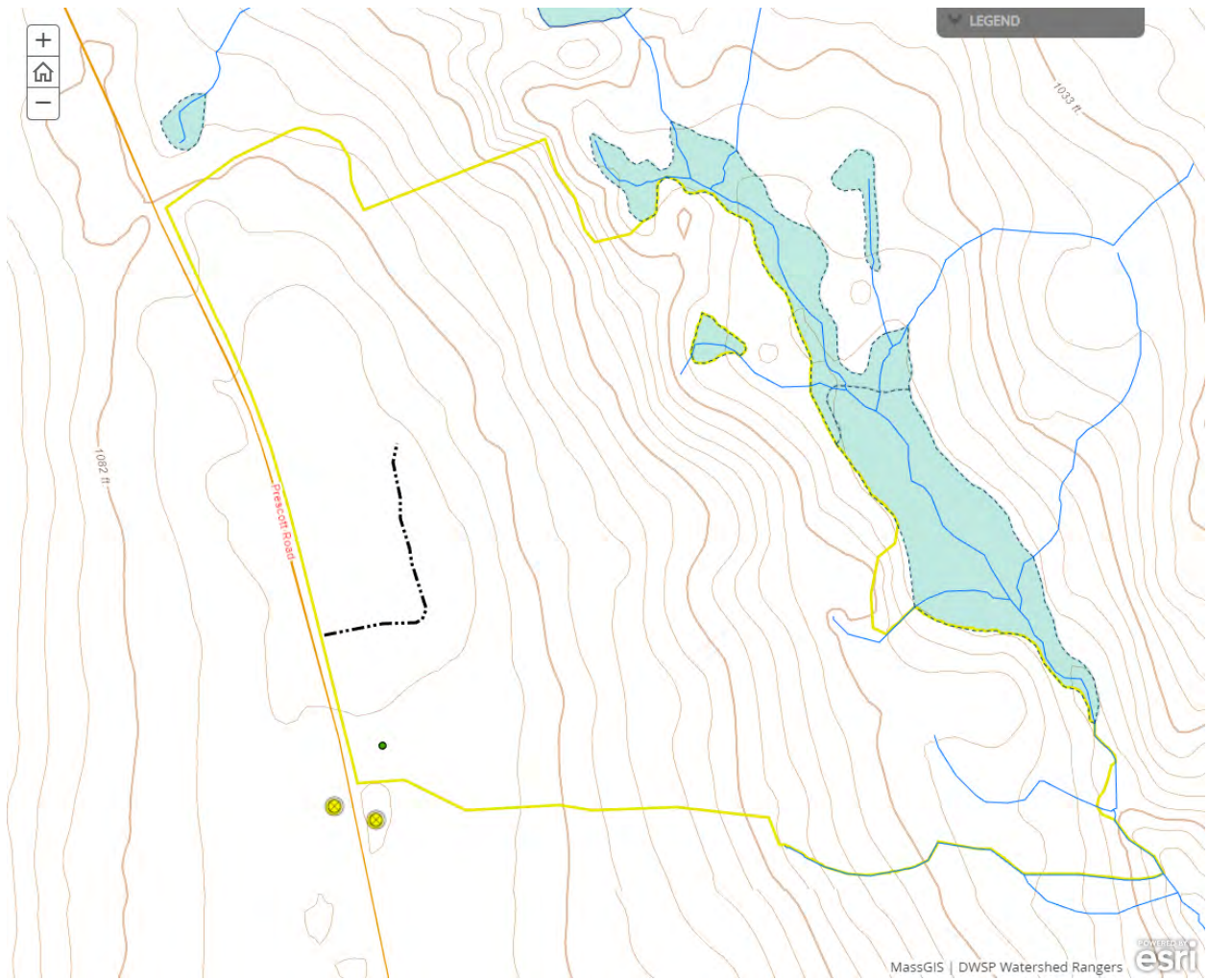
Culverts needed: No

Work needed on permanent bridges: No

Beaver issue: No

Further comment on access needs:

May need some gravel, although the landing held up well when it was last used in 2010.



DWSP FY 2022 Forestry Proposals – Master Legend for story maps

