Quabbin Harvest Proposal PT-19-11

Proposal Goals

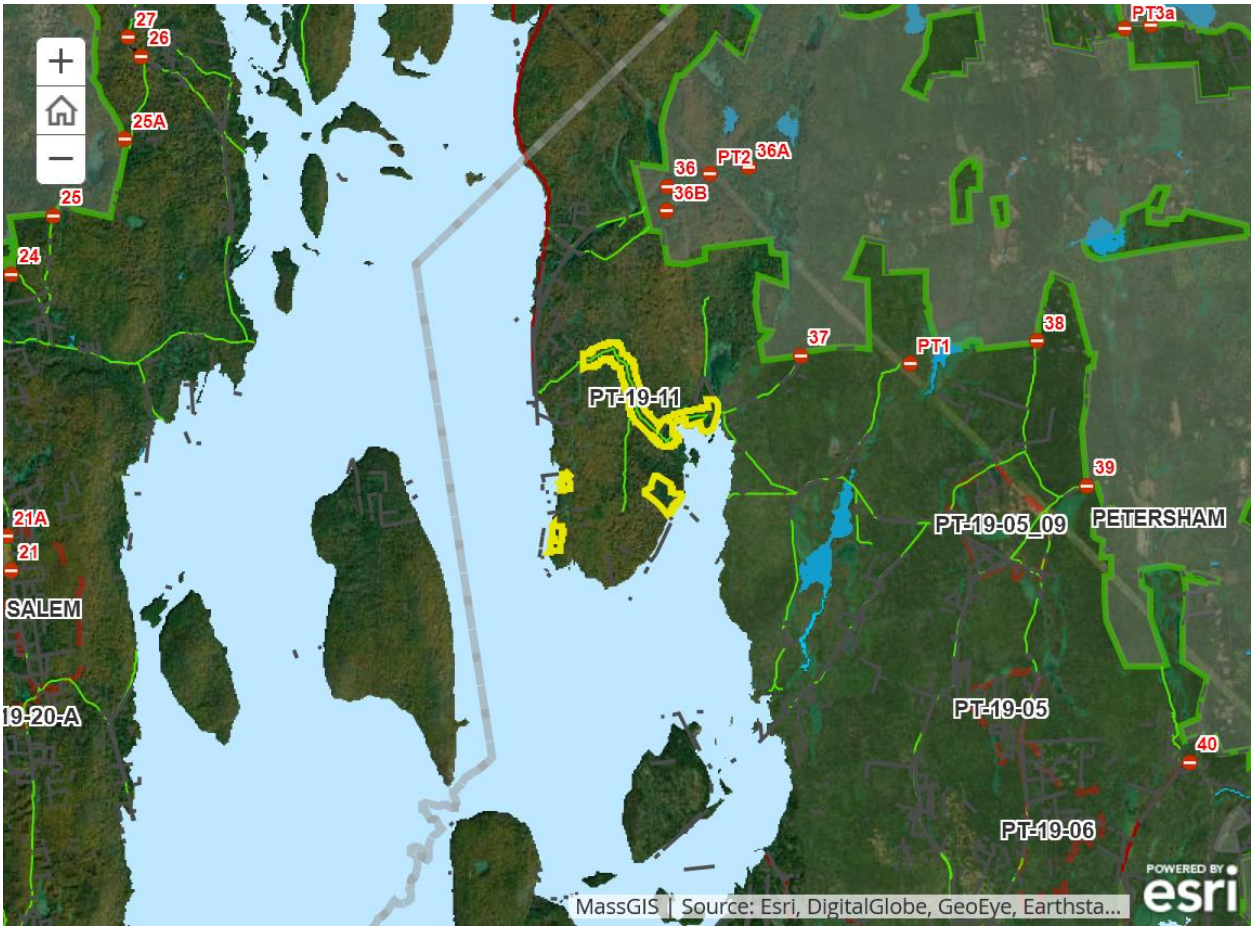
The goal of this proposal is to remove red pine before it's killed by red pine scale.

Proposal Location

This proposal is located along both sides of North Dana road and in three plantations on the peninsula to the south.

Total Acres: 75.9

Previously reviewed as PT-09-11



General Description

	Overstory Type(s)	Acres
Dominant	Red pine	31.1
Secondary	White pine/hardwood	44.8

	Understory Type(s)
Dominant	Tree seedlings/saplings dominate the site

Description of forest composition/condition:

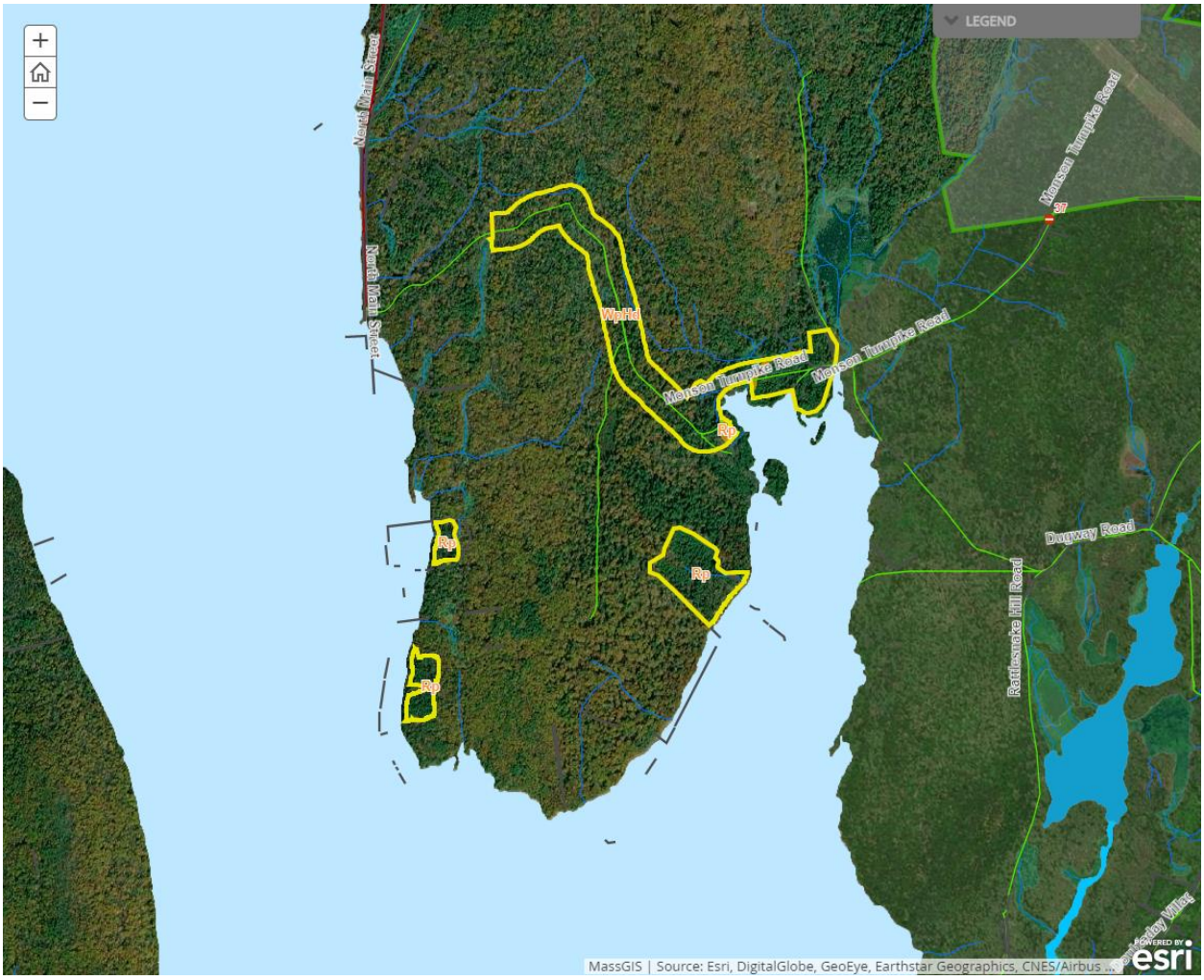
The roadside strip is mostly white pine-hardwood with scattered red pine mixed in an 8 acre red pine plantation at the east end. The health of the red pine was still good as of the stand exam late in 2017, but there were early signs of possible red pine scale infestation. This area has had numerous harvests, including:

- A selection harvest on the north side of the road in 2007
- A shelterwood regen establishment cut on the south side of the road in 2004
- An intermediate harvest in the roadside red pine plantation in 1989
- A shelterwood prep cut on the south side of the road at the west end of the proposed area in 1988
- Intermediate harvests on both sides of the road in 1983
- A shelterwood prep cut on the south side of the road in 1972

Most of the roadside strip has strong regeneration, especially of white pine, as a result of these harvests.

Red pine in the plantation on the east side of the peninsula is showing greater signs of decline than the red pine by the road, but was still viable as of the stand exam at the end of 2017. The eastern half was thinned in 1989. The western half was clearcut at the same time, but is included in this proposal in order to harvest any remnant red pines that are still standing.

The two red pine plantations on the west edge of the proposal have never been thinned by DWSP. This is problematic for red pine plantations, which tend to stagnate due to the lack of factors that would creates variations in competitiveness, such as genetic and age diversity, and variability of spacing and microsite conditions. The consequences can be seen in these plantations, which are overstocked and stagnant, with small average diameter, flat crowns, and low live crown ratios. No trees have had enough of a competitive edge to differentiate from the rest and become vigorous dominant individuals. With no “winners,” the entire plantations are now “losers.” They were also showing advanced signs of red pine scale as of the stand exam in late 2017; it can be expected that these weakened trees will succumb quickly, perhaps before they can be harvested.

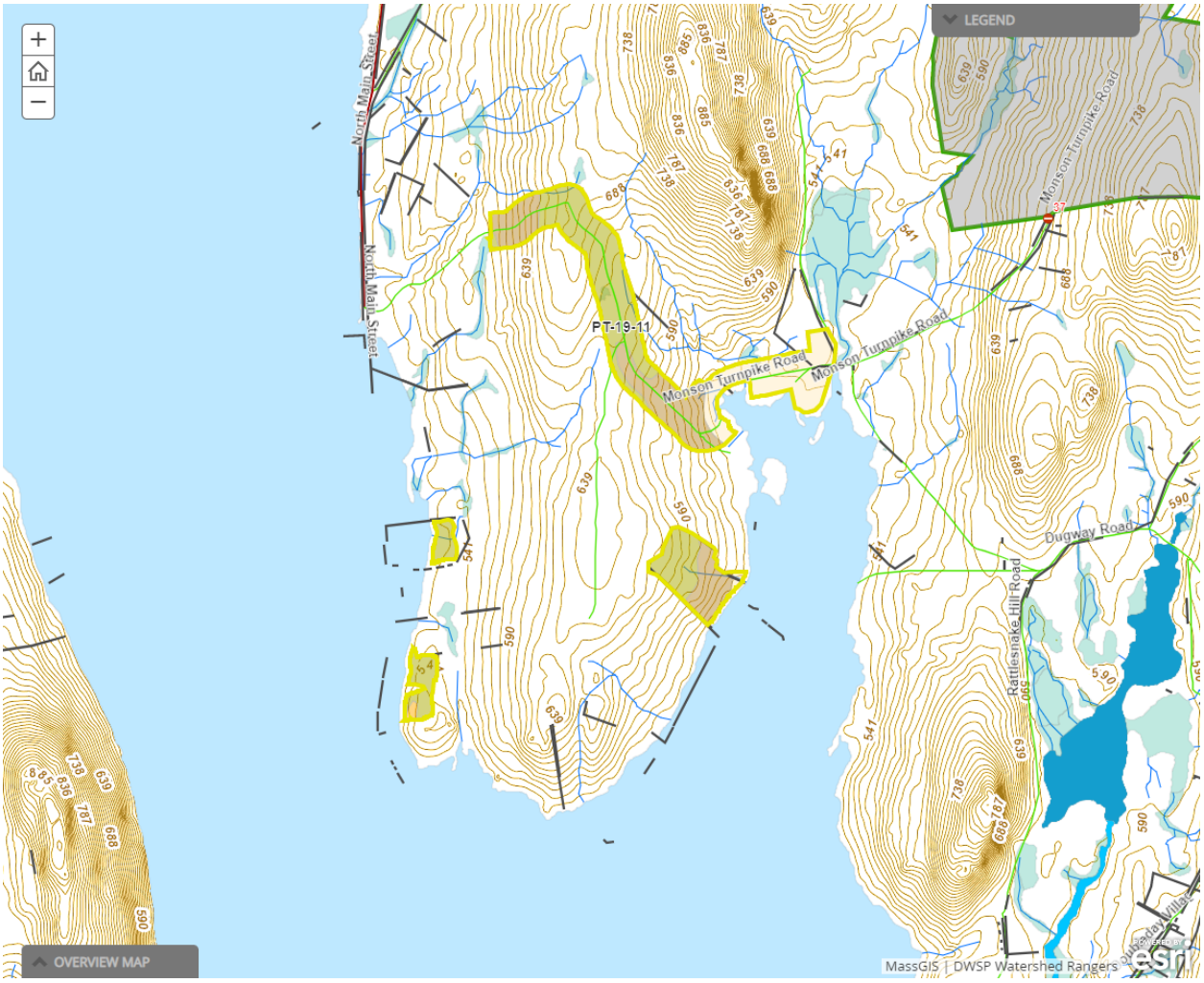


Soils

Drainage Class	%
Excessively Drained	23
Well Drained Thin	0
Well Drained Thick	77

Moderately Well Drained	0
Poorly to Very Poorly Drained	0

Soil types include Hinkley sandy loam; Charlton-Chatfield-Hollis association, very rocky; and Montauk-Canton and Montauk-Scituate-Canton associations, extremely stony.



Wetlands

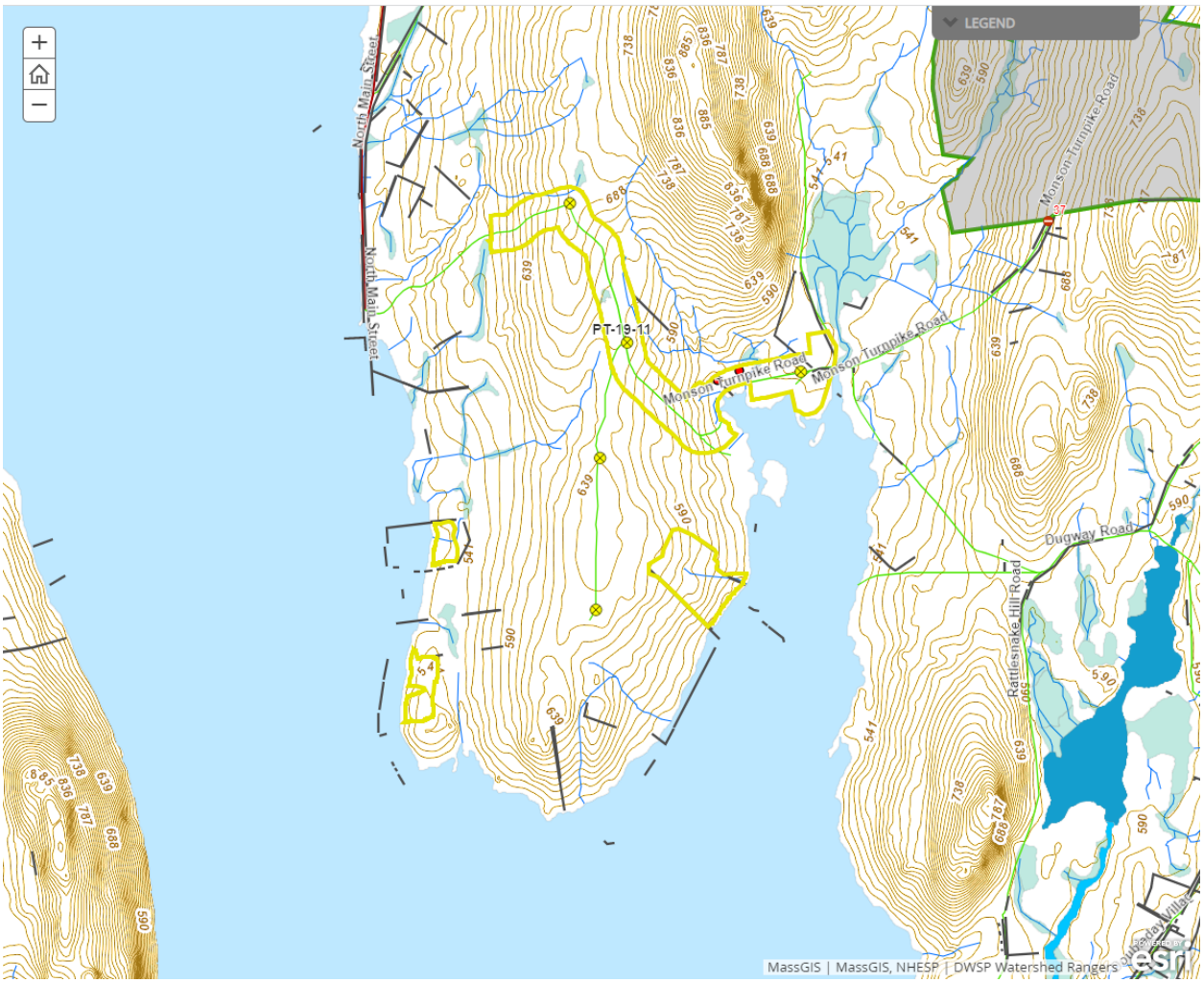
- Wetlands present? - **Yes**
- Streams present? - **Yes**
- Vernal pools present? - **Yes**

- 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**

Further comments on wetlands:

There are two verified vernal pools to the north of the road, just west of the red pine plantation. There will be no harvesting within 200 feet of these features.

There are numerous small wetlands and intermittent streams on the west side of the peninsula, including an intermittent stream bisecting the smallest red pine plantation. These will be avoided as much as possible, but a few intermittent stream crossings will be needed to get to the western plantations.



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: **5**

Description of advance regeneration in proposal area:

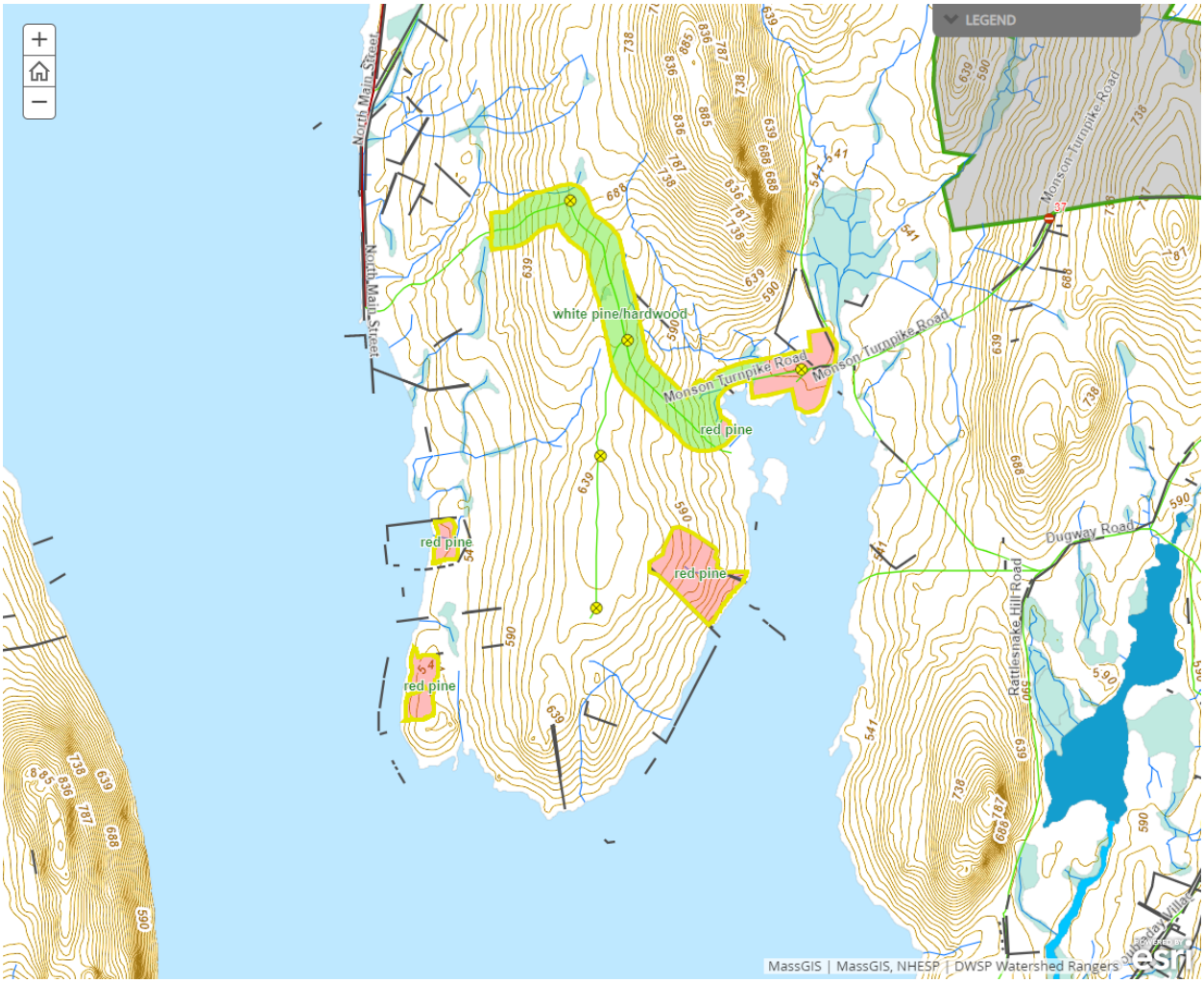
Most of the roadside strip has strong regeneration, especially of white pine. The west red pine plantations have very little. The east red pine plantation has some regeneration, especially within the clearcut area, has there has been some storm damage here as well.

General comments on silviculture proposed:

The purpose of this proposal is to enable harvesting of red pine, if it is possible to do so before it's killed by red pine scale. All red pine within plantations will be cut, unless they must be left due to filter strips or cultural or other features to be protected. These will become openings ranging from 2 to 5 acres.

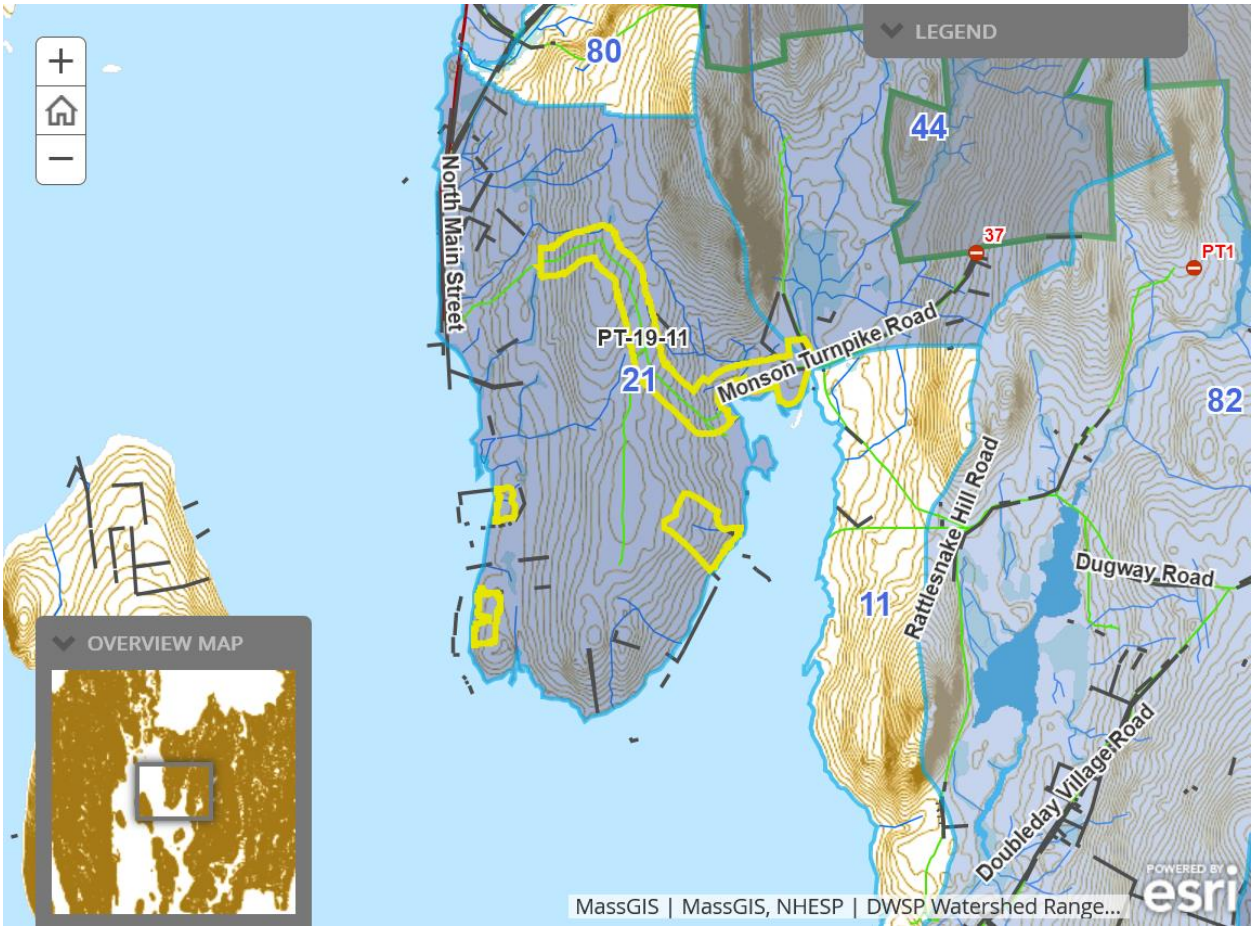
In the roadside white pine-hardwood stand, the main objective will be to cut all red pine. White pines and hardwoods that are at risk of falling into the road will be cut for public safety. A small number of white pines and hardwoods with very poor form, health and vigor will be cut in conjunction with the red pine, in order to make small gaps in the canopy, and to facilitate access to the red pine.

Both in plantations and in mixed stands, healthy, well formed trees of species other than red pine will be retained and protected. Red pine that has declined to the point of being unsalvageable at the time of marking will be left to die in place.



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
21	740.7	2.8	182.3	75.9



Harvesting Limitations

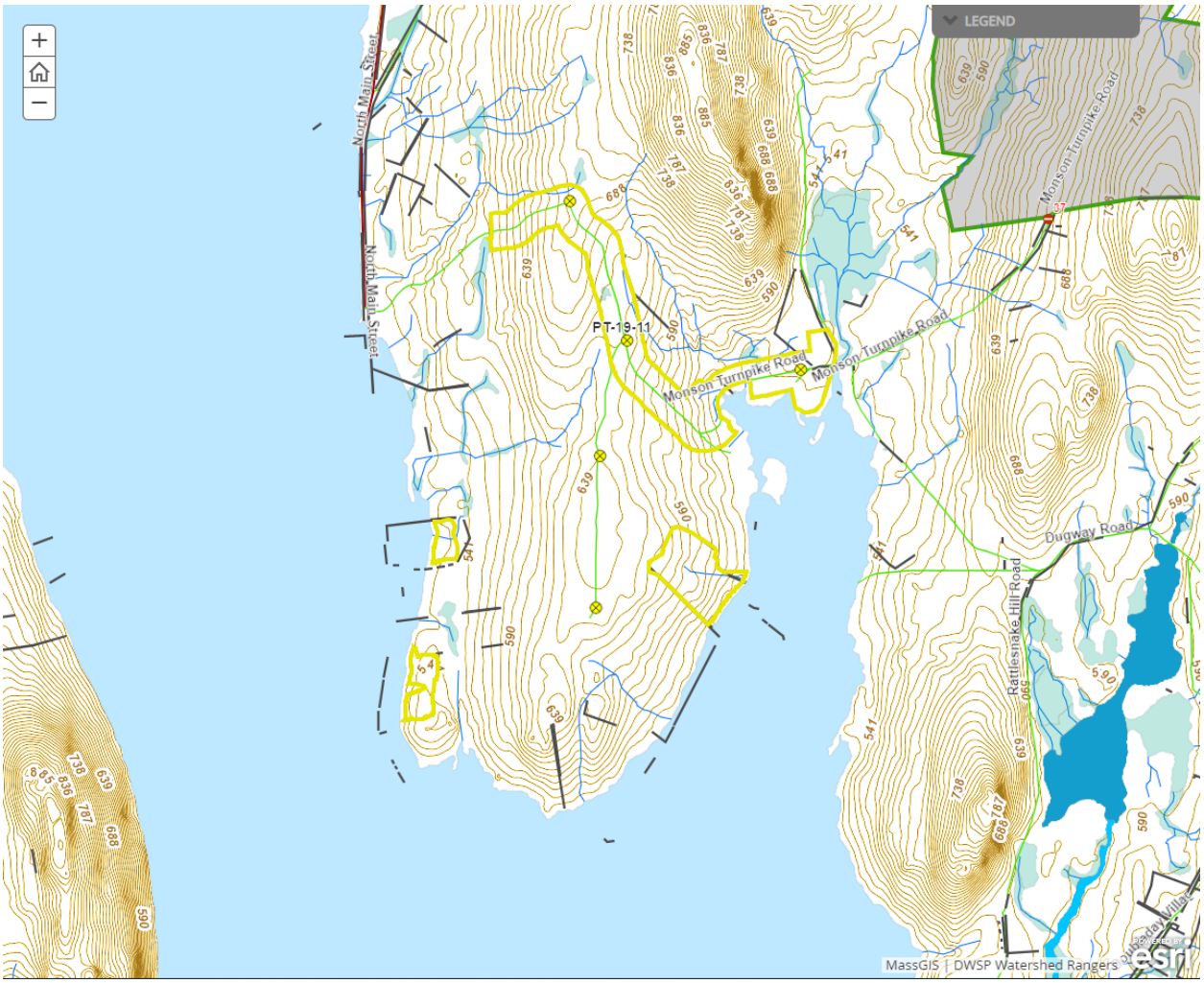
Forwarder required: **No**

Feller/processor required: **No**

Steep slopes present: **No**

Comments on harvesting limitations:

No harvesting limitations are proposed.



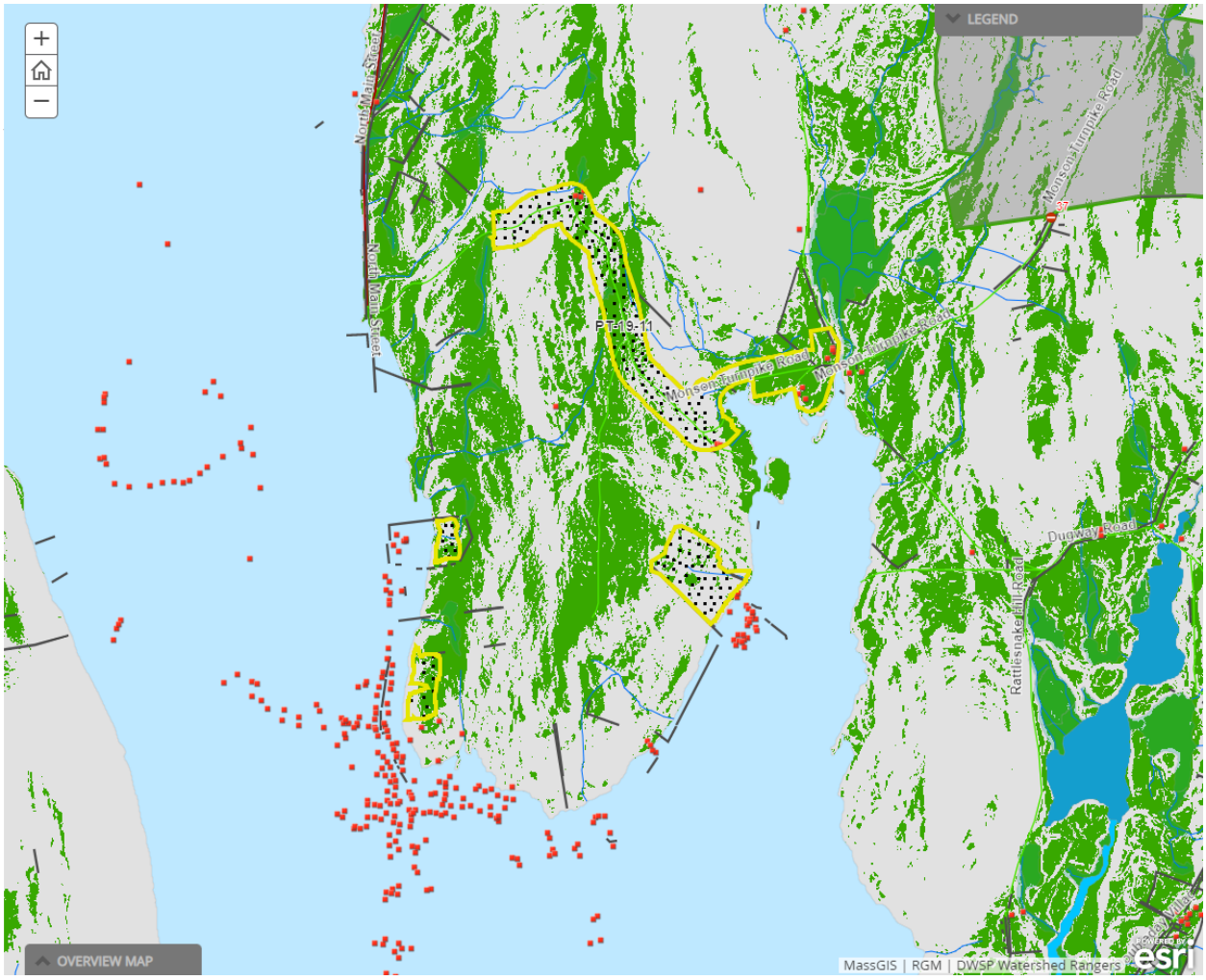
Cultural Resources

Comments on Cultural Resources:

There are numerous “thrown” stone walls in this area, including some around the perimeters of the red pine plantations, and many between the plantations. There are numerous house, barn and shed sites around the perimeter of the peninsula and under the water at the edge of the Reservoir, but none of these are within the area to be harvested. There is also a house, barn and garage site near the road in the area with thick invasive plants, and a house site with two nearby cellar holes in the northernmost part of the proposed area.

Existing barways will be used where feasible and harvest layout will protect walls as much as possible. Wells and foundations will be flagged and avoided. If applicable DWSP will follow

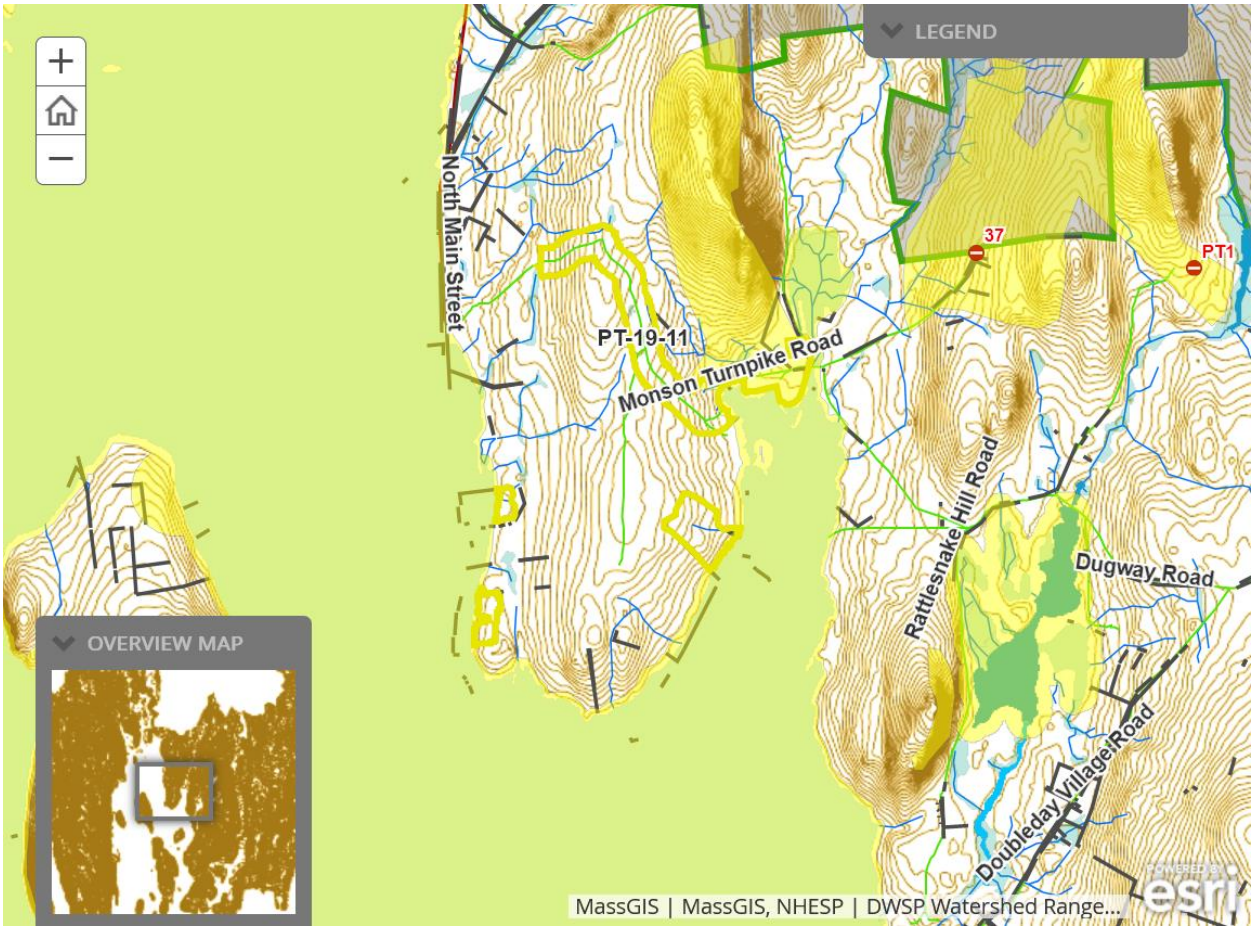
any additional recommendations from DCR's Archaeologist regarding protection of sensitive sites.



Wildlife Resources & Rare and Endangered Species

Comments on Rare Species/Habitats:

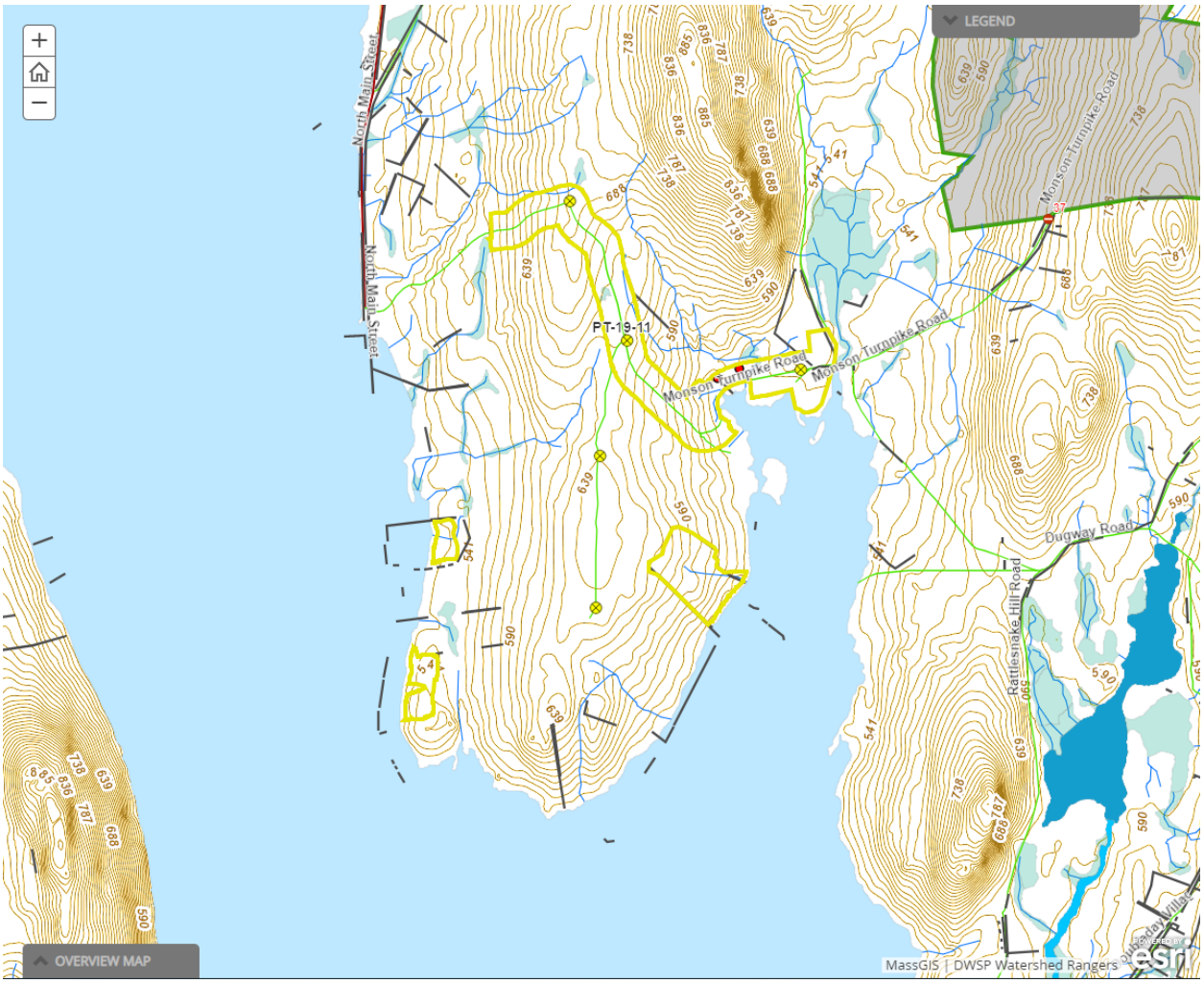
Cavity trees and potential/existing nest trees will be retained if possible. NHESP has determined that certain state-listed sensitive species or habitats may exist within the portions of the proposal area. To protect them from unnecessary disturbance, detailed information regarding affected species and their locations is not included in this report. DWSP will coordinate with NHESP and follow recommendations to protect these species during the proposed harvest.



Environmental Quality Engineering

Comments on EQ Issues:

There are no perennial stream crossings.



Forest Access Engineering

Gravel needed: No

Landing work needed: No

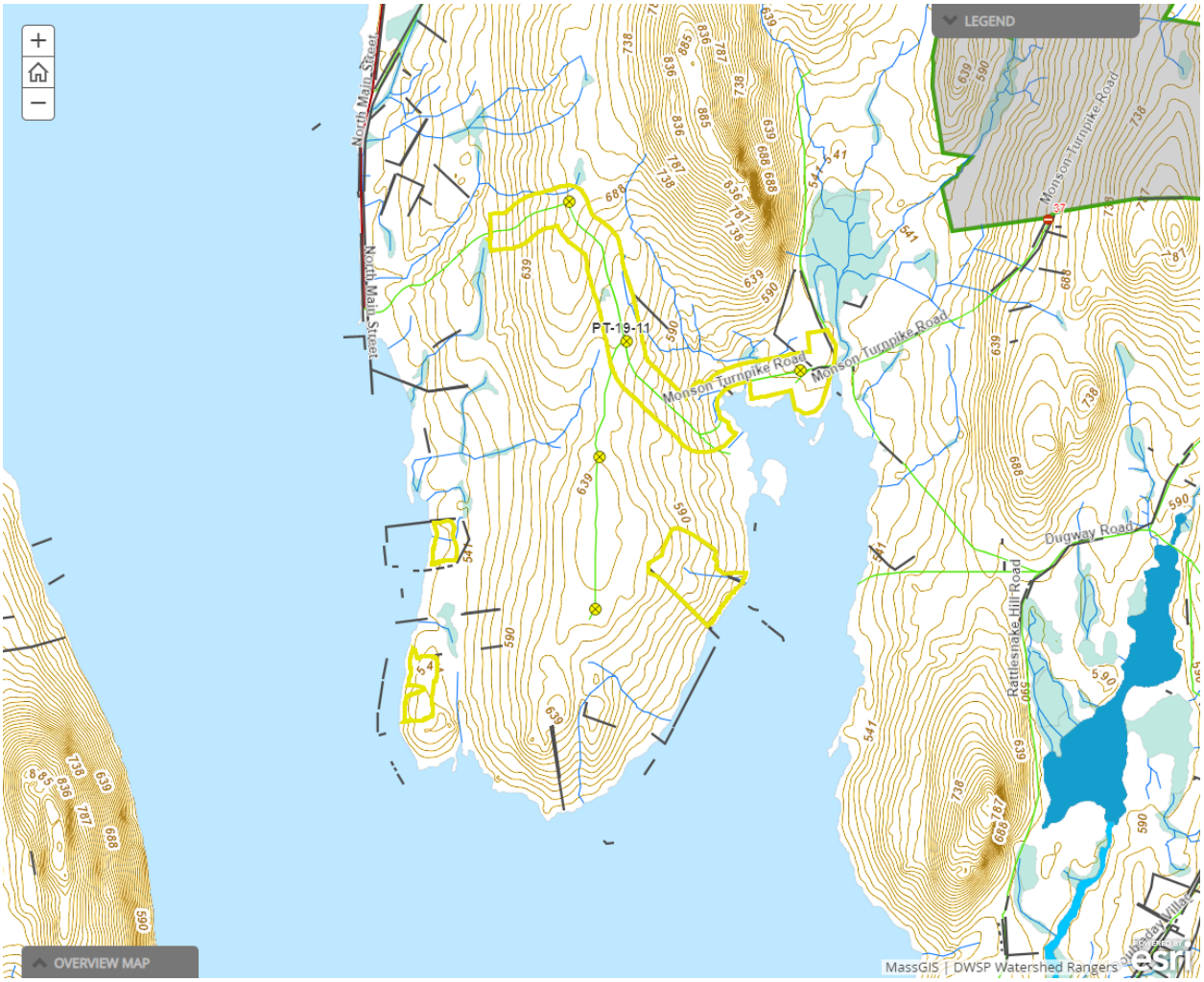
Culverts needed: No

Work needed on permanent bridges: No

Beaver issue: No

Further comment on access needs:

None.


LEGEND
PT-19-11
North Main Street
Monson Turnpike Road
Dugway Road
Rattlesnake Hill Road
OVERVIEW MAP
MassGIS | DWSP Watershed Rangers
esri

DWSP FY 2019 Quabbin and Ware River Forestry Proposals – Master Legend for story maps