Quabbin Harvest Proposal PT-22-13

Proposal Update, May 2024:

This forestry proposal was originally approved through the public process in 2021. 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 2021 in ArcGIS Online Story Map format.

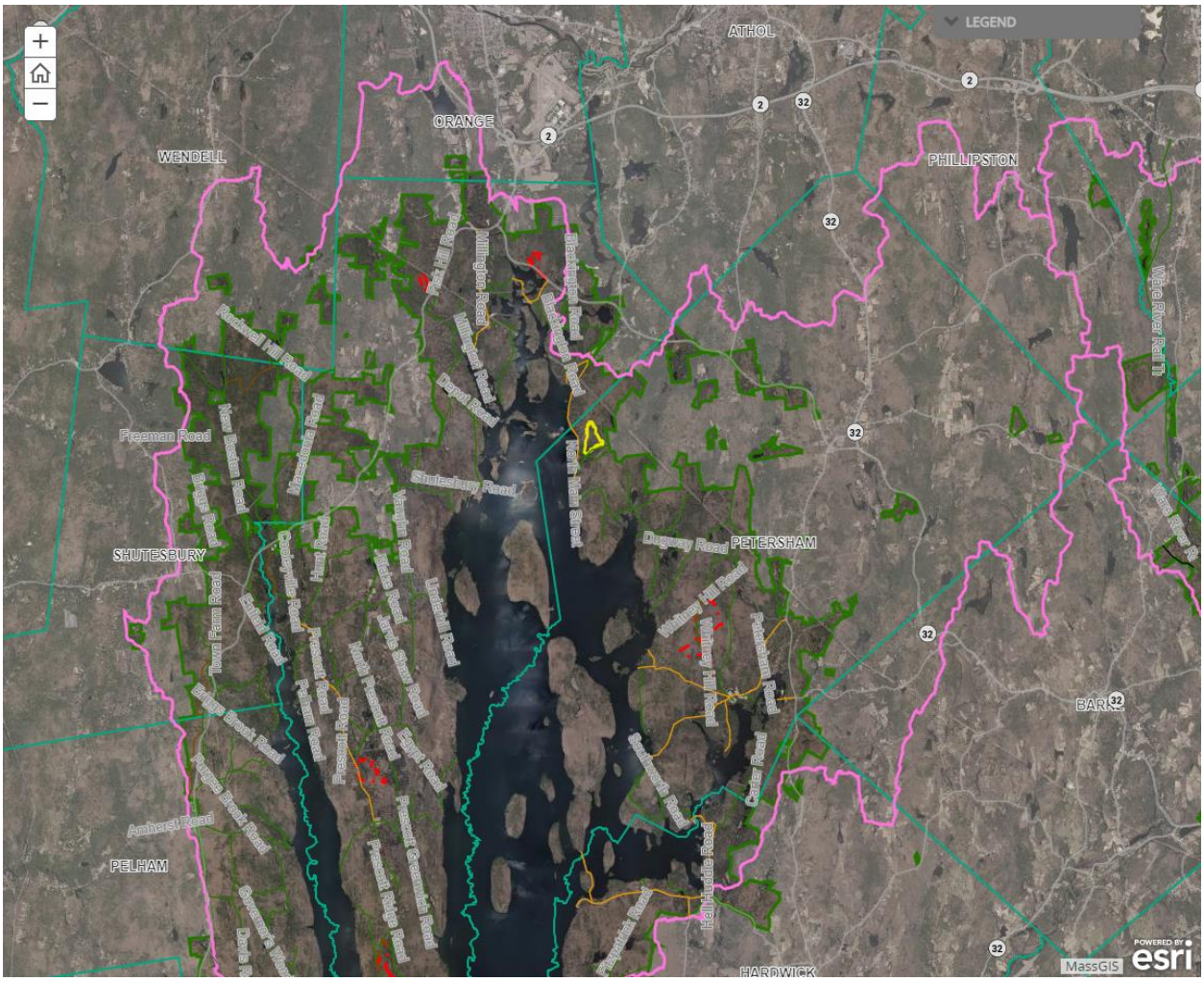
Proposal Goals

The primary goal here for this proposal is to release patches of diverse advance regeneration to promote diversity and resiliency. Oak regeneration is particularly plentiful and well-developed in this area and will be favored.

Proposal Location

Bounded to the northeast by a steep slope descending to an unnamed perennial stream and associated wetlands; to the southeast a steep slope descending to the Gate 36 access road; and to the west by a line extending approximately 3,000 feet northerly from intersection 35-2A.

Total Acres: 53



General Description

	Overstory Type(s)	Acres
Dominant	White pine - oak	30
Secondary	Oak - hardwoods	19
Other	White Pine	4

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

Description of forest composition/condition:

Most of the proposal area has a multi-aged mix of oaks and other hardwoods with emergent white pine. White pine vigor is good throughout, but form is highly variable, ranging from very poor old field white pine in the southwest with multiple forks and stems, lots of sweep, and/or many large branches, to clear straight sawtimber to the north and east. The Quabbin forest types layer shows an abandoned orchard on the southwest border of the proposal area, but no fruit trees were found, and the area is now dominated by old field white pine.

The oak species mix is diverse, including red, black, scarlet, white and occasional chestnut oak. Oak form and vigor is generally fair to poor, in part because the area was hit hard by gypsy moth, resulting in damage to the crowns of the oaks that survived. Red maple with fair form and vigor is a common associate. Less common sawtimber species include white ash, big tooth aspen, and pitch pine. Most of the hardwoods with good form are red oak. Scarlet oak has particularly bad form, often with large branches and knots, lightning scars, and large cavities.

Pole stock includes red maple, red oak, white oak, white ash, paper birch, black birch, black cherry, and occasional shagbark hickory. Excellent advance regeneration is in place, with dense oak seedlings on the upper slopes, and white pine mixed with oak and other hardwoods on the lower slopes. Chestnut stump sprouts are also present.

The shrub layer includes witch hazel, mountain laurel, blueberry, huckleberry, hazelnut and hawthorn. Groundcover includes wintergreen, partridgeberry, clubmoss, and sheep laurel, and hay-scented fern. Grape vines are present but not numerous, and do not appear to be damaging the canopy. The witch hazel, mountain laurel and hay-scented fern are not dense enough to cause major regeneration challenges; invasives will be a more serious problem (see below).

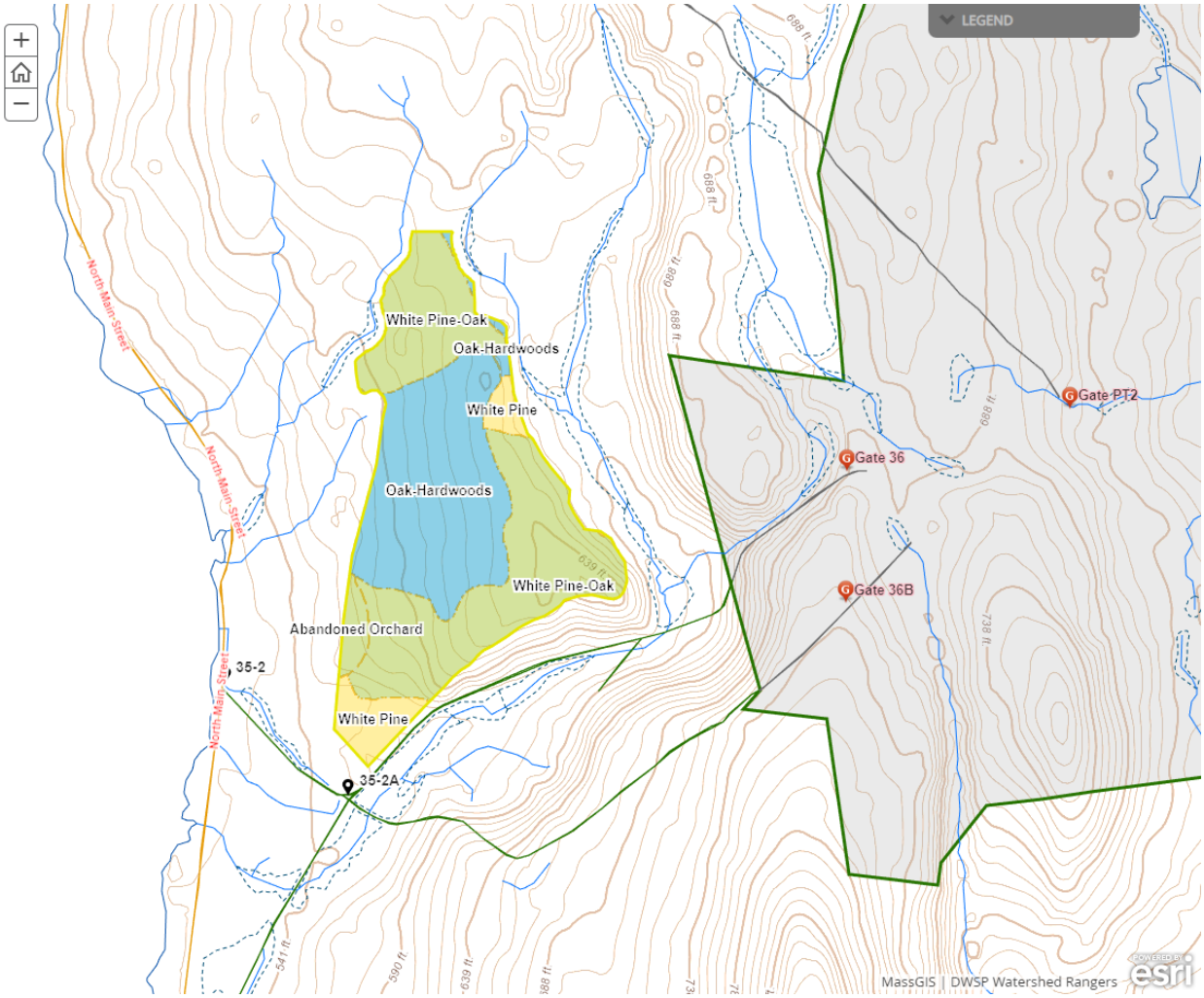
This area received an 11.7 acre salvage cut in 1991. About 3 acres were part of adjacent shelterwood prep cuts, to the east in 1990 and to the southwest in 1969. Some of the old field white pine was girdled at an unknown date, with variable success.

Assessment of Terrestrial Invasive Species:

Seven species of invasives were observed: Japanese barberry, bittersweet, honeysuckle, Japanese knotweed, multiflora rose, euonymous and phragmites. Most of these (honeysuckle, Japanese knotweed, multiflora rose, and euonymous) are outside the proposal area, concentrated in and around an old cellar hole at intersection 35-2A. Multiflora rose and euonymous are present in small patches, with only a few stems apiece. Knotweed and honeysuckle patches are larger, but still concentrated in limited areas. Phragmites is located primarily in the beaver pond across Gate 36 road.

In contrast, bittersweet is extensive within the proposal area, both around the cellar hole and along an old woods road that leads from the cellar hole at intersection 35-2A to the former orchard to the north. At present it seems to be limited to these edge areas. Japanese barberry is more widespread still, particularly under the old field white pine and into the more diverse adjacent stands. The upper slopes to the east and north seem to be uncontaminated as yet.

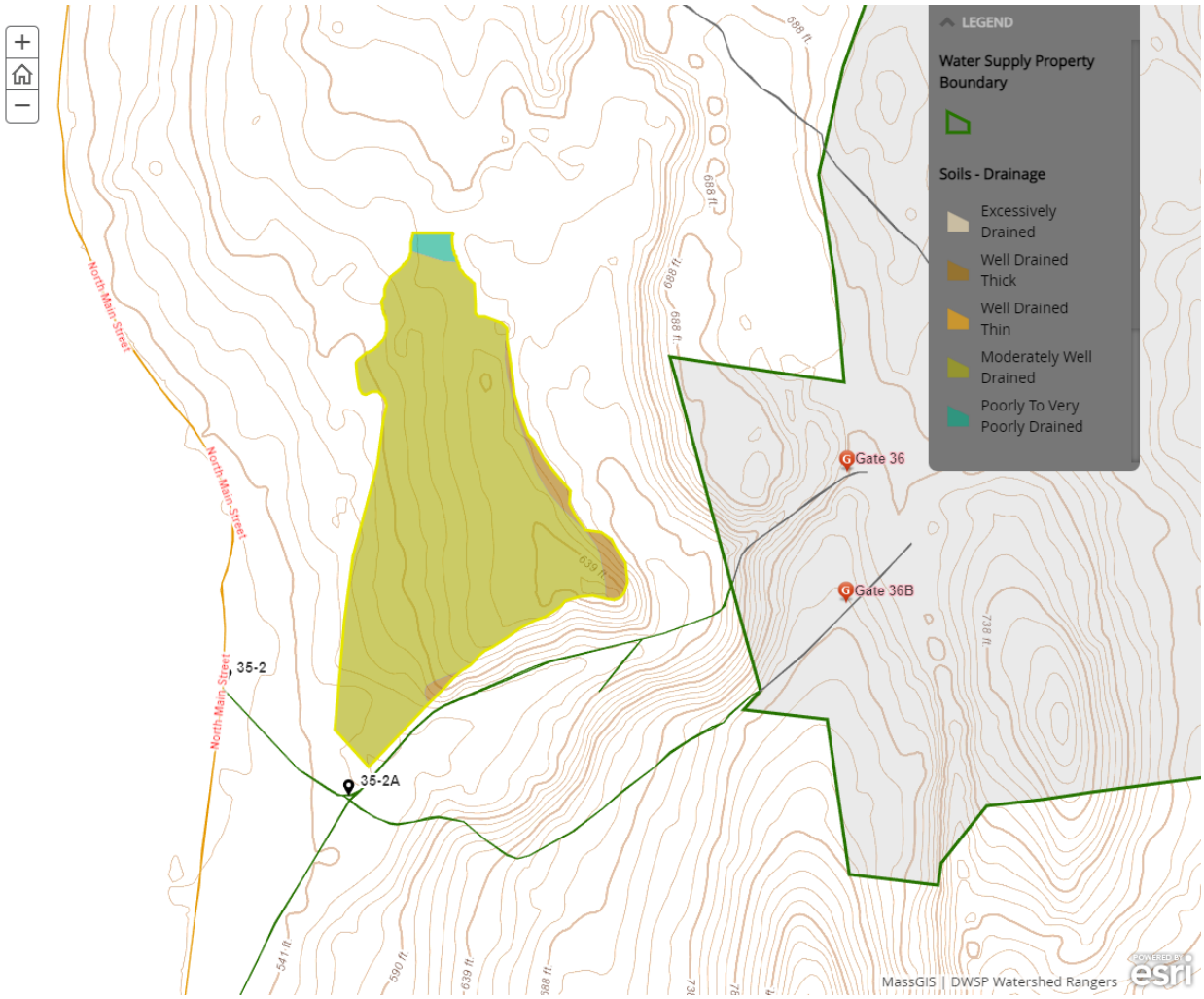
Of these invasives, bittersweet probably poses the greatest risk to future forest development. Ideally all of the invasives would be treated whether or not the area is harvested, but at minimum bittersweet should be treated prior to cutting, to reduce the risk of it spreading into newly created openings.



Soils

Drainage Class	%
Excessively Drained	0
Well Drained Thin	0
Well Drained Thick	4
Moderately Well Drained	95
Poorly to Very Poorly Drained	1

Based on field reconnaissance, it's likely that the entire area is moderately well drained Montauk-Scituate-Canton association, 3 to 15 percent slopes, extremely stony. The other types shown in the soils layer are poorly drained Ridgebury-Whitman association, 0 to 8 percent slopes, and well drained thick Montauk-Canton association, 15 to 45 percent slopes. However the entire proposal area is upland with gentle slopes, so these other soils were probably mislabeled due to imprecise mapping.

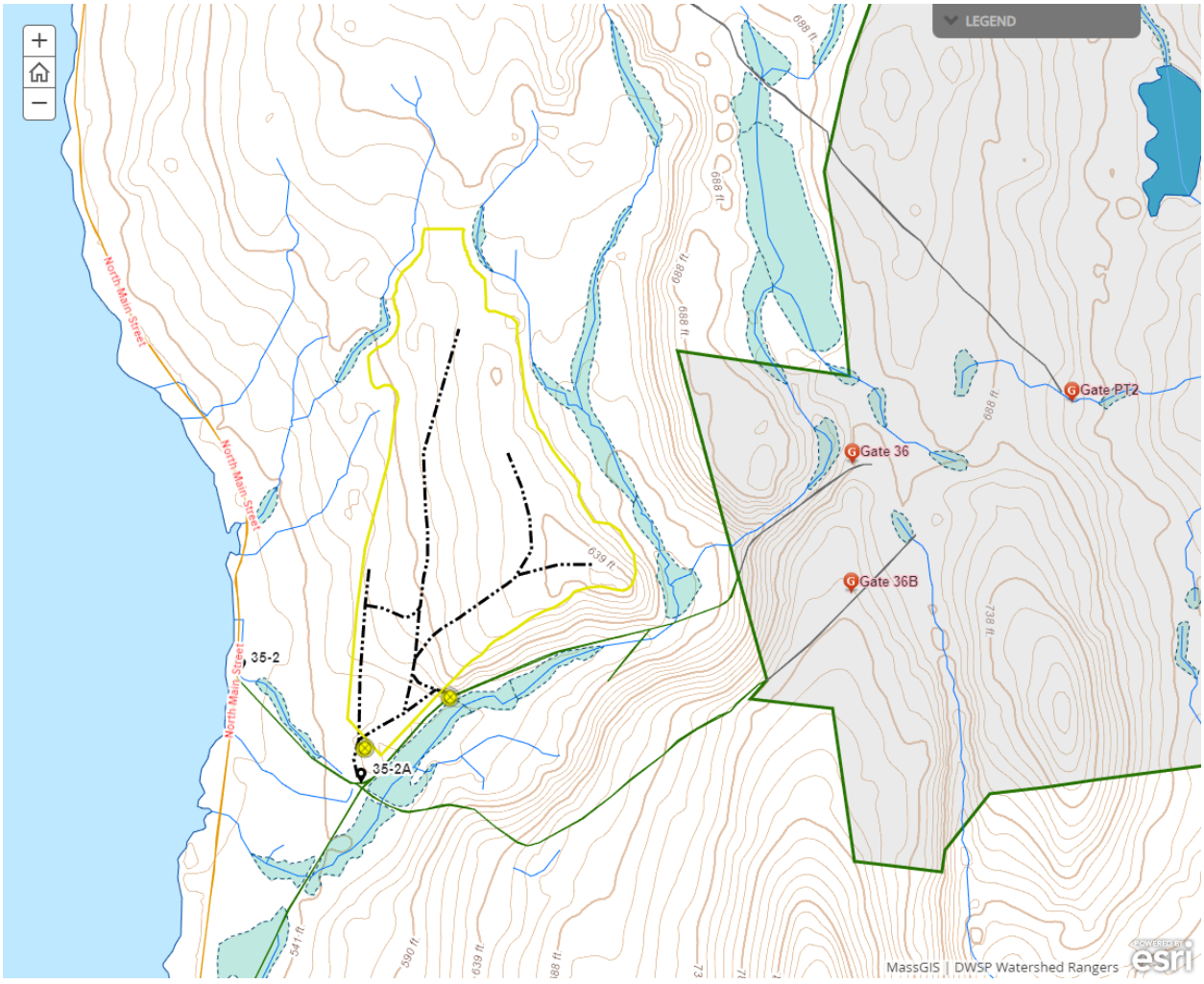


Wetlands

- Wetlands present? - **Yes**
- Streams present? - **Yes**
- Vernal pools present? - **None known**
- Seeps present? - **Yes**
- Are stream crossings required? - **No**
- Are wetland crossings required? - **No**
- Is logging in filter strips planned? - **Yes**(Riparian Zone Mgt)
- Is logging in wetlands planned? - **No**

About 700 feet north of the cellar hole at intersection 35-2A, there's a seep and associated small wetland. An intermittent stream flows out of the wetland, disappearing about 115 feet downhill at a stone wall.

There are numerous other streams and wetlands near this proposal, but no others within the harvest area. All wetland features within and adjacent to the harvest will be protected by filter strips.



Silviculture

Acres in Intermediate cuts: **0**

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

Acres in Regeneration cuts: **17**

Average regen opening size: **1.5**

Maximum regen opening size: **4**

Description of advance regeneration in proposal area:

Excellent advance regeneration is in place, with dense oak seedlings on the upper slopes, and white pine mixed with oak and other hardwoods on the lower slopes.

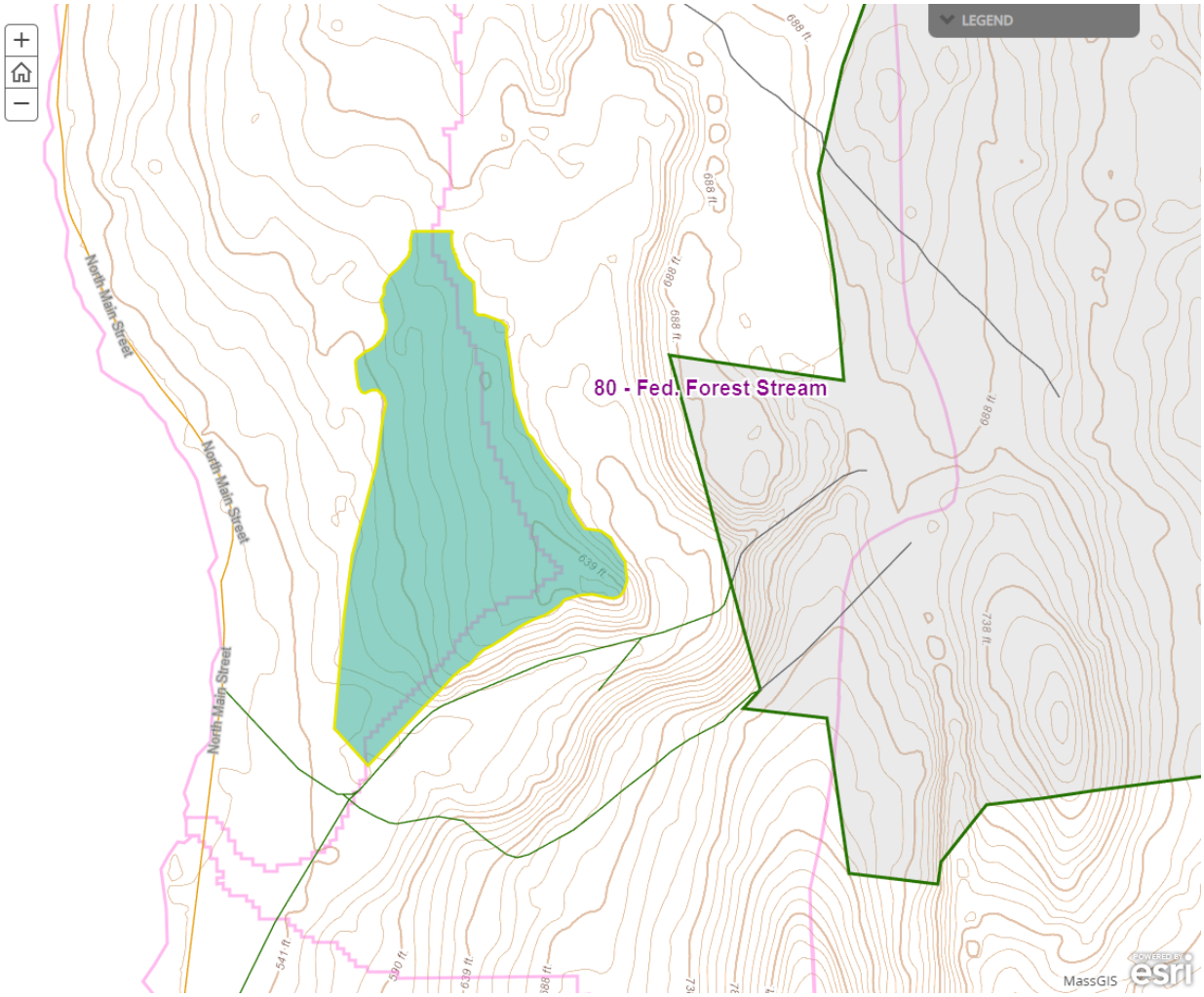
General comments on silviculture proposed:

The primary objective of this harvest is to release advance regeneration, especially oak, while it's still viable. This will be accomplished by creating openings of up to 4 acres by removing trees with weak form and/or poor health, the largest being a patch of very low quality white pine in the southwest area near the landing. 5-10 ft2/acre of healthy, vigorous mature trees with good form will be retained in most openings. Oaks with large crowns and good form will be favored as seed sources, and the healthiest trees of all species will be retained.

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
10 (Northeast Shoreline)	776	10	192	38
80 (Federated Forest Stream)	313	18	65	15

Proposed harvesting will not exceed the 25% threshold.



Harvesting Limitations

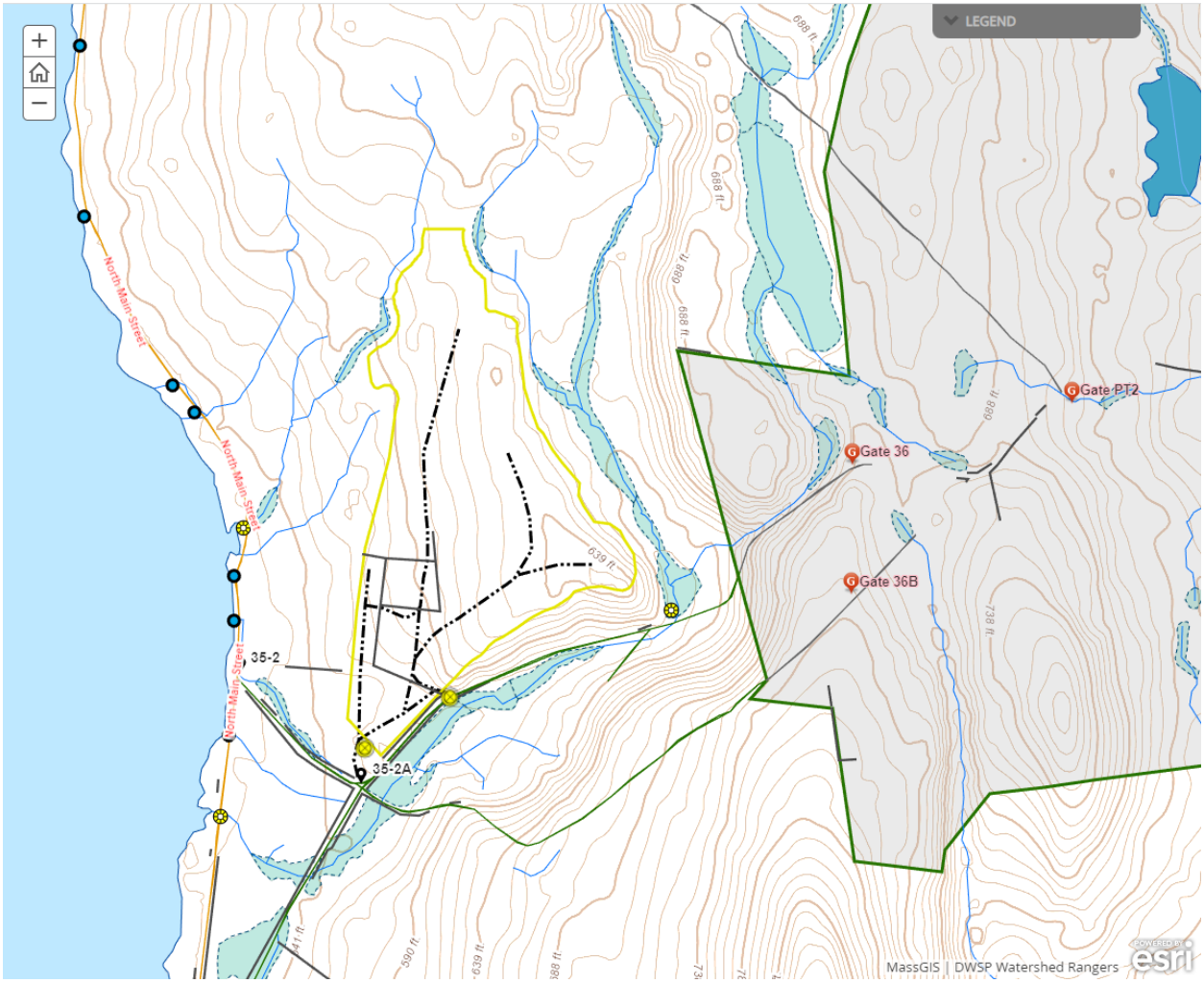
Forwarder required: **No**

Feller/processor required: **No**

Steep slopes present: **No**

Comments on harvesting limitations:

None.



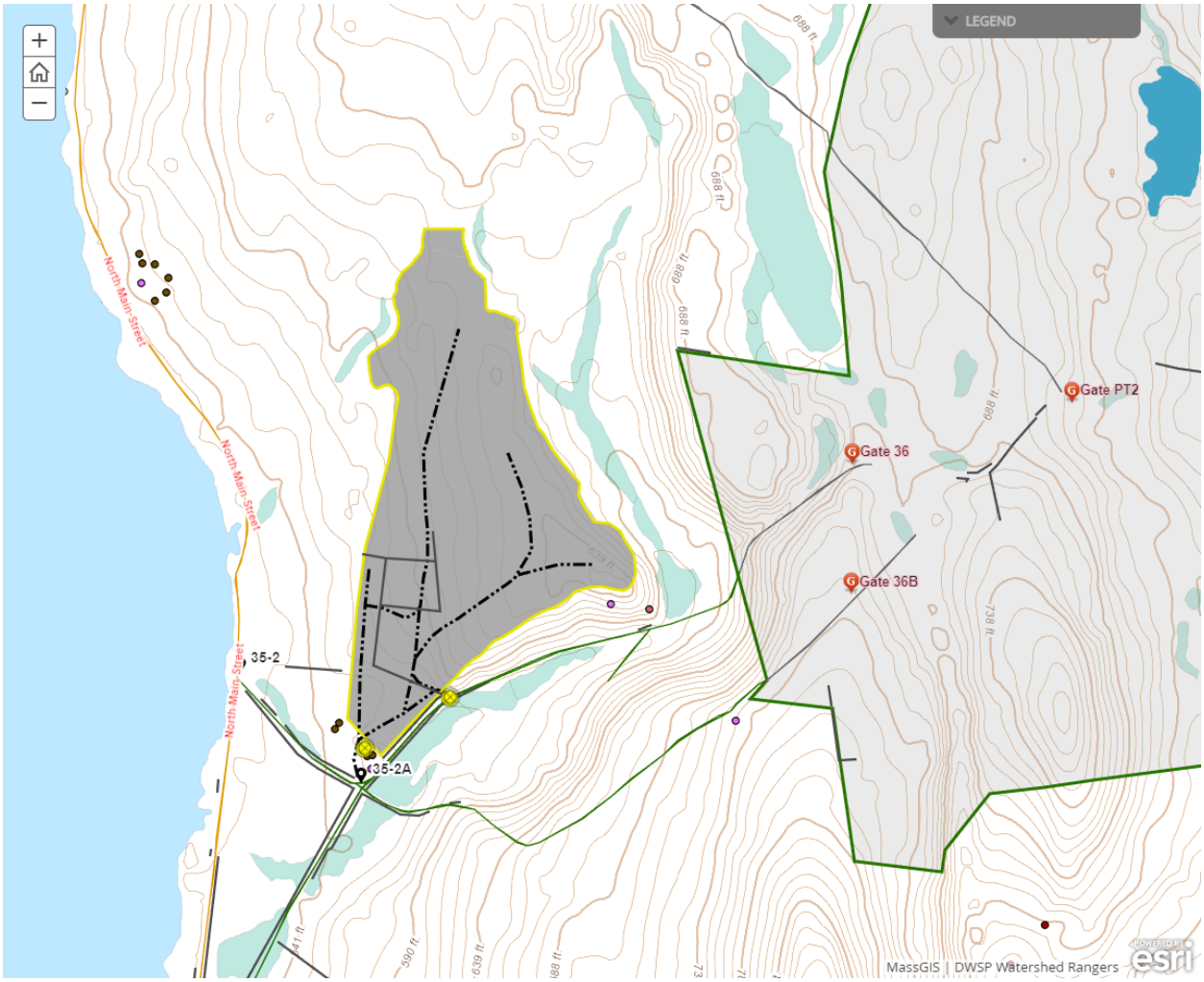
Cultural Resources

Comments on Cultural Resources:

This lot contains numerous thrown stone walls, most of them near intersection 35-2A. Wherever possible walls will be protected and avoided; however, they may need to be crossed or barways widened in some locations. Such crossings will be minimized, and will be located where walls are already breaking down due to prior use.

Additional cultural sites that are near but not within the harvest area include a former homestead near intersection 35-2A that included a house, a barn and two sheds; and about 1,500 feet up the road, a former school with a house nearby.

Two wells were found about 700 feet north of the cellar hole at intersection 35-2A; they will be mapped, flagged and protected, as will any other cultural features that are identified in the course of this harvest.



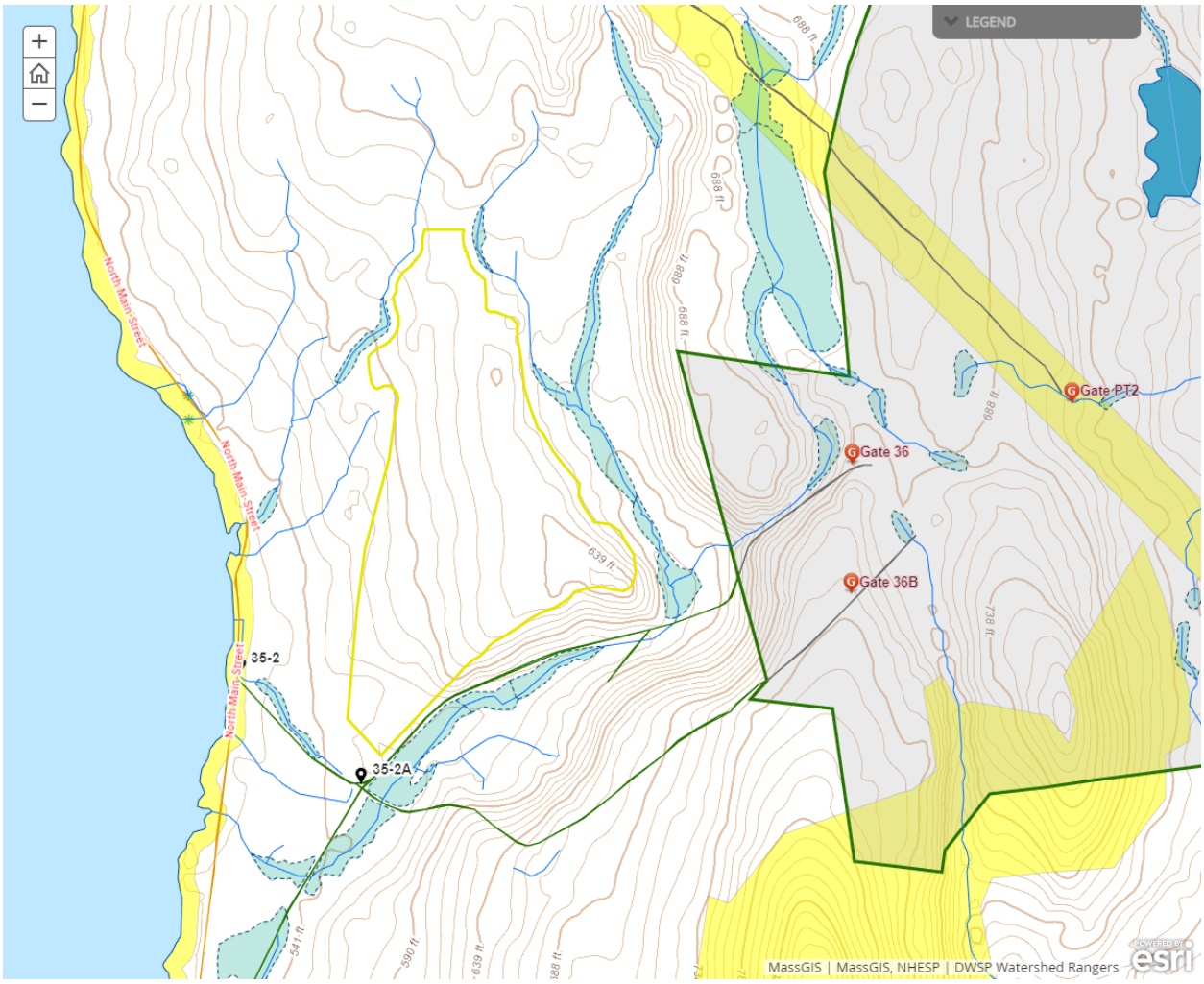
Wildlife Resources & Rare and Endangered Species

General Wildlife Comments:

Moderate deer browse was observed on oak and other hardwood seedlings, along with numerous deer pellets and tracks. Weevilled white pine and oaks killed by gypsy moth are providing habitat for pileated woodpeckers. There's a large beaver pond on the other side of the access road, but to date no evidence of beaver has been observed in the proposal area.

Comments on Rare Species/Habitats:

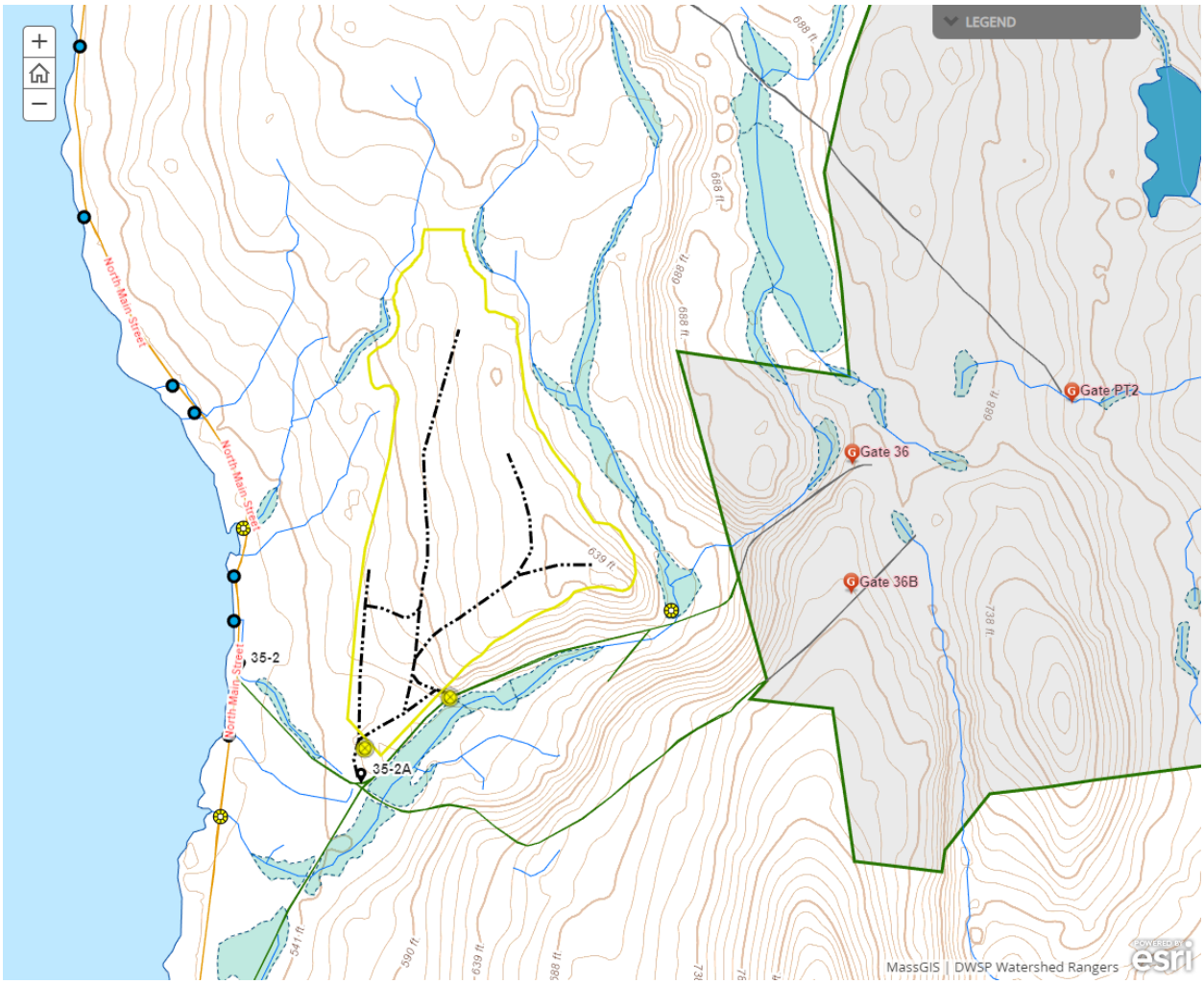
No rare species or rare habitats located within the proposal area.



Environmental Quality Engineering

Comments on EQ Issues:

There are no perennial streams or stream crossings on this lot.



Forest Access Engineering

Gravel needed: Yes

Landing work needed: No

Culverts needed: Yes

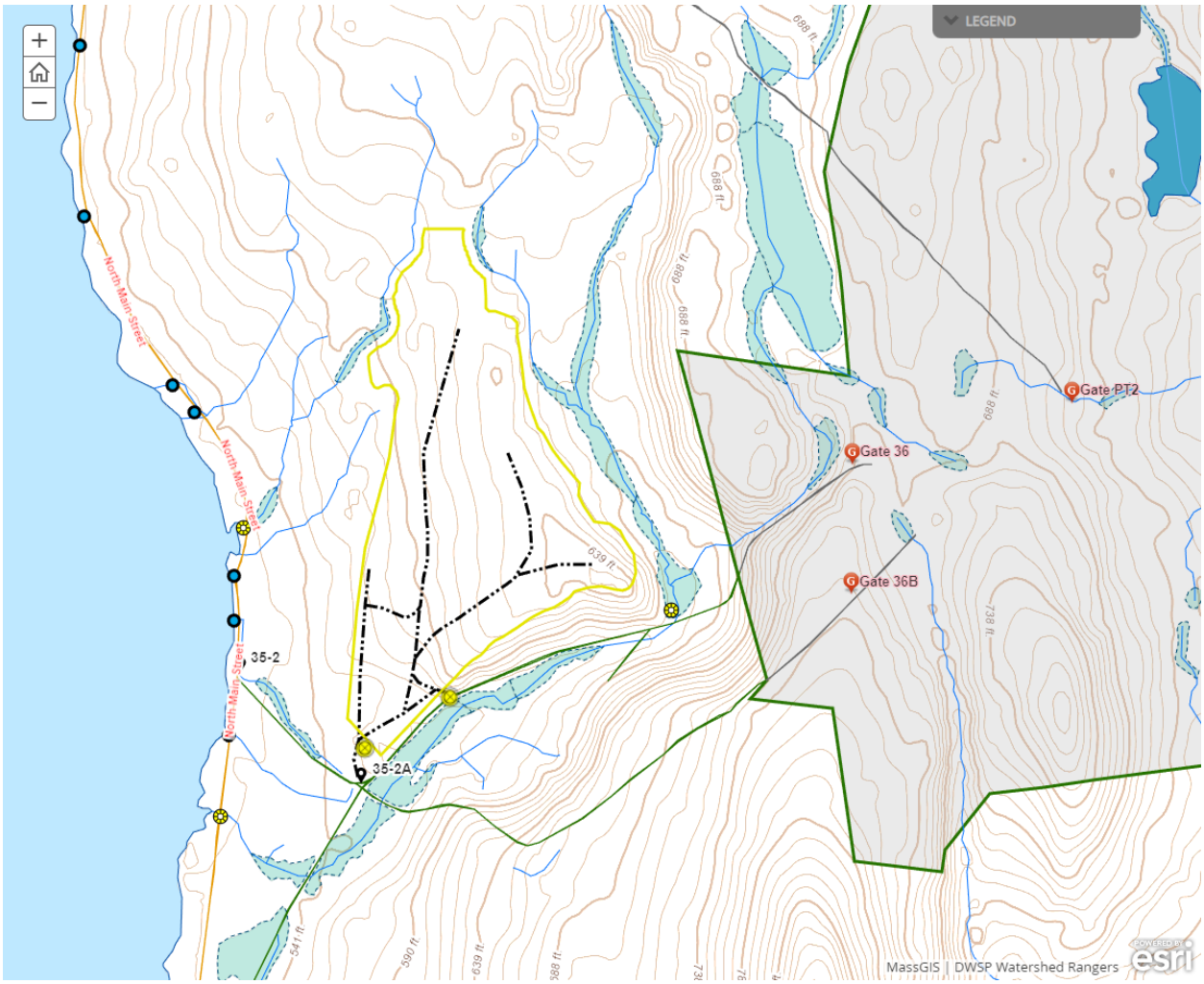
Work needed on permanent bridges: No

Beaver issue: Potential

Further comment on access needs:

Gravel may be needed depending on conditions at the start of the job. Culvert work may be needed on the Gate 35 access road.

There are not currently issues related to the beaver pond south of the Gate 36 access road, but it's possible that this could change.



DWSP FY 2022 Forestry Proposals – Master Legend for story maps