# Quabbin Harvest Proposal PT-23-06

### *Proposal Update, May 2024:*

*This forestry proposal was originally approved through the public process in 2022. 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 2022 in ArcGIS Online story map format, but* ***the reader should ignore references to salvage****.*

## Proposal Goals

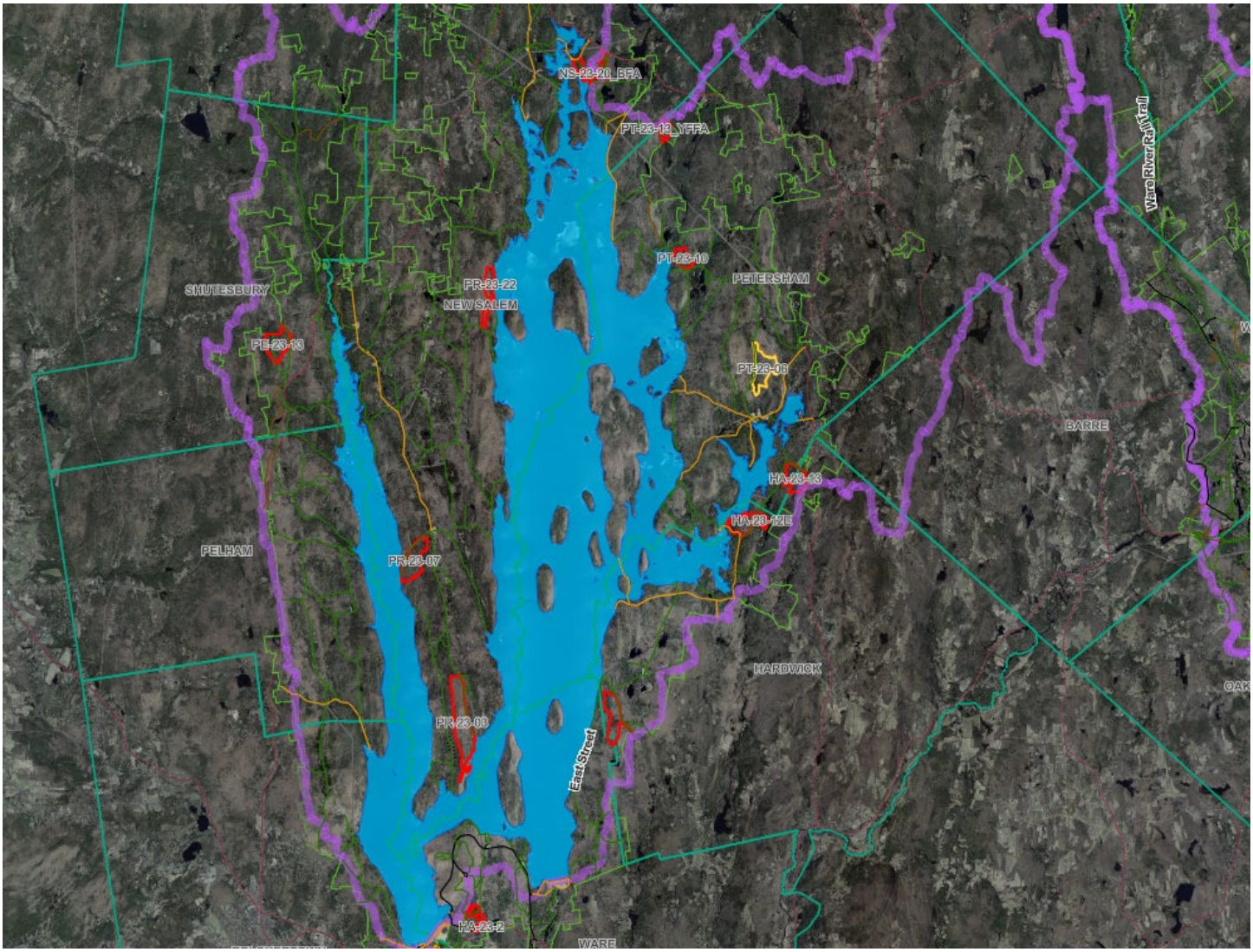
This is a re-proposal of PT-19-06 from FY2019. Main goal is to diversify the age structure of this even-aged forest while maintaining or increasing the species diversity through creation of openings between ¼-3 acres totaling about 35 acres. Treatment will improve vigor of established seedlings and saplings and additional thinning and shelterwood prep cutting will release retained trees and will improve overall stem form and growth rate.

## Proposal Location

(Yellow highlighted polygon in the map) Along the east side of Mary Tamplin Road.

## **Total Acres:** 141

Figure 1. Watershed Locus, PT-23-06.



# General Description

| Overstory Type(s) | Acres |
|---|---|
| White pine - oak | 55 |
| Oak - hardwoods | 86 |

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

**Description of forest composition/condition:**

Main type is comprised of a couple of stands (OH4/5, OR4) on an upland site. Most of area had been cut at least once over the last 30 years and stands have tended to develop with more red, black and scarlet oak, hickory, and black birch as dominate hardwoods along with some red maple, white birch and black cherry. Scattered white pine is also present in overstory on about half of the type. Scattered white oak and white ash also present.

Rest of lot is now several stands of what would be better described as white pine/oak with a couple of the stands having dominate crowns approaching 100' in height. Red oak is the most common hardwood with black, scarlet and white also present along with black and white birch, hickory and red maple.

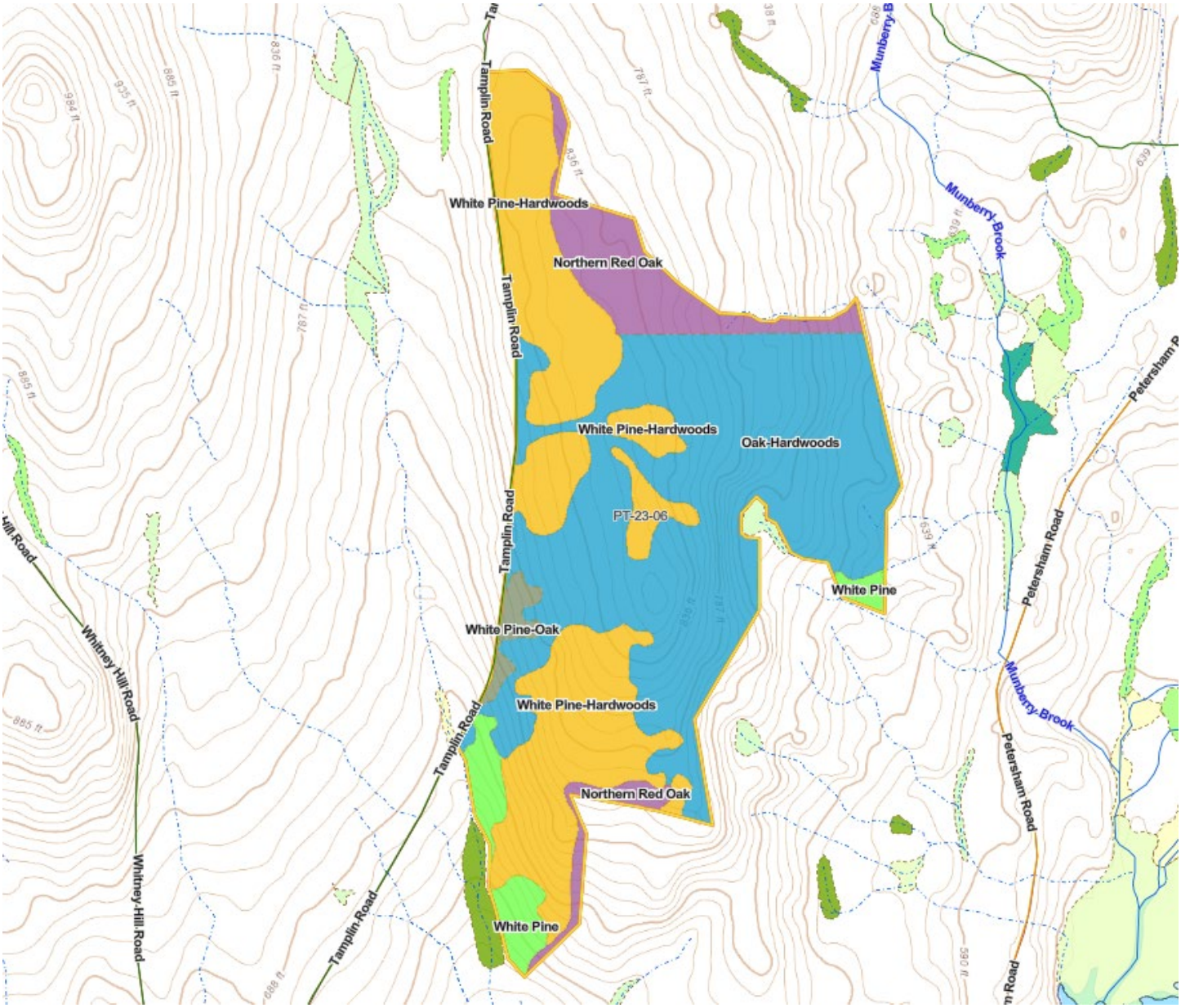
Stand was heavily impacted (total defoliation 2017) by spongy moth (gypsy moth) in 2016 and '17 with some mortality of oak being observed in fall of 2017. Not many egg masses were observed on base of trees in fall 2017 so was somewhat optimistic that GM population had crashed but still had some continued defoliation/mortality in '19 and '20. Other than that both stands appear to be fairly healthy though there are still numerous poorly formed and/or less vigorous trees. Quit a few emergent, course white pine are present along with cavity trees of both hardwood and softwoods. Most areas are fully to over stocked. Part of the southern section had small (under 1/4 acre) openings created by one of the previous cuts and the regeneration (mostly black birch and white pine) is now over topped and stagnant. Rest of lot, where previously cut, appears to have just had firewood thinning or a light prep cut.

Regeneration is mainly black birch and/or white pine and pine in particular has gotten stunted and stagnant. Red maple and beech are also common with scattered oak though more oak regeneration was noted along some of the lower slopes on east side. There is also some hemlock near the wet areas here and to the south where there is a small stand of WK.

**Assessment of Terrestrial Invasive Species:**

No invasives seen during walk through but Japanese barberry and bittersweet are across the street and Japanese knotweed, bittersweet, honeysuckle and barberry are along access road north of Dana Common.

Figure 2. Forest cover types, PT-23-06.

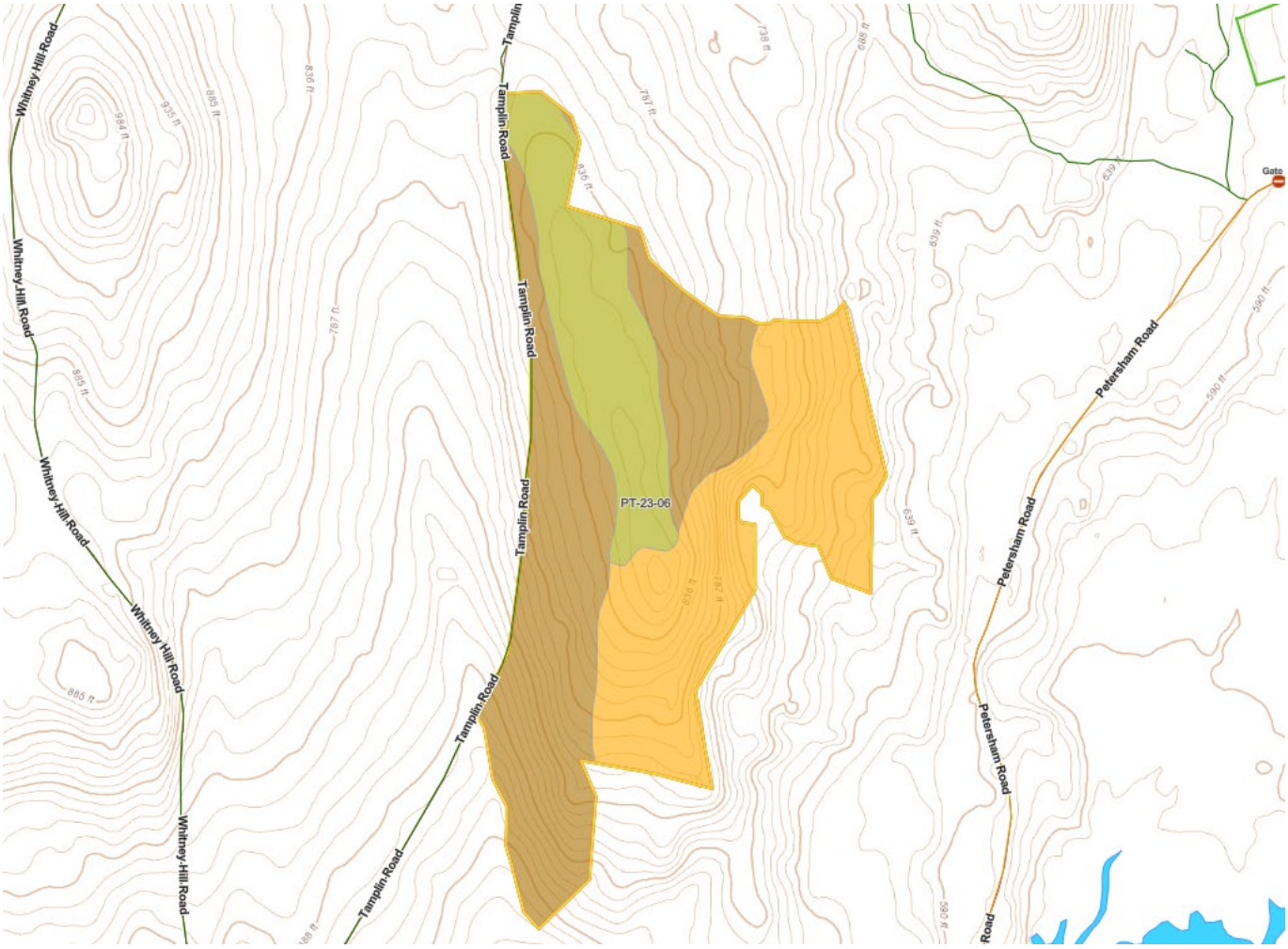


# Soils

| Drainage Class | % |
|---|---|
| Excessively Drained | 0 |
| Well Drained Thin | 37 |
| Well Drained Thick | 42 |
| Moderately Well Drained | 21 |
| Poorly to Very Poorly Drained | 0 |

Soils are mainly well drained Montauk-Canton association and Charlton-Chatfield-Hollis association with an area north central part of lot with moderately well drained Montauk-Scituate-Canton association.

Figure 3. Soil classes, PT-23-06.

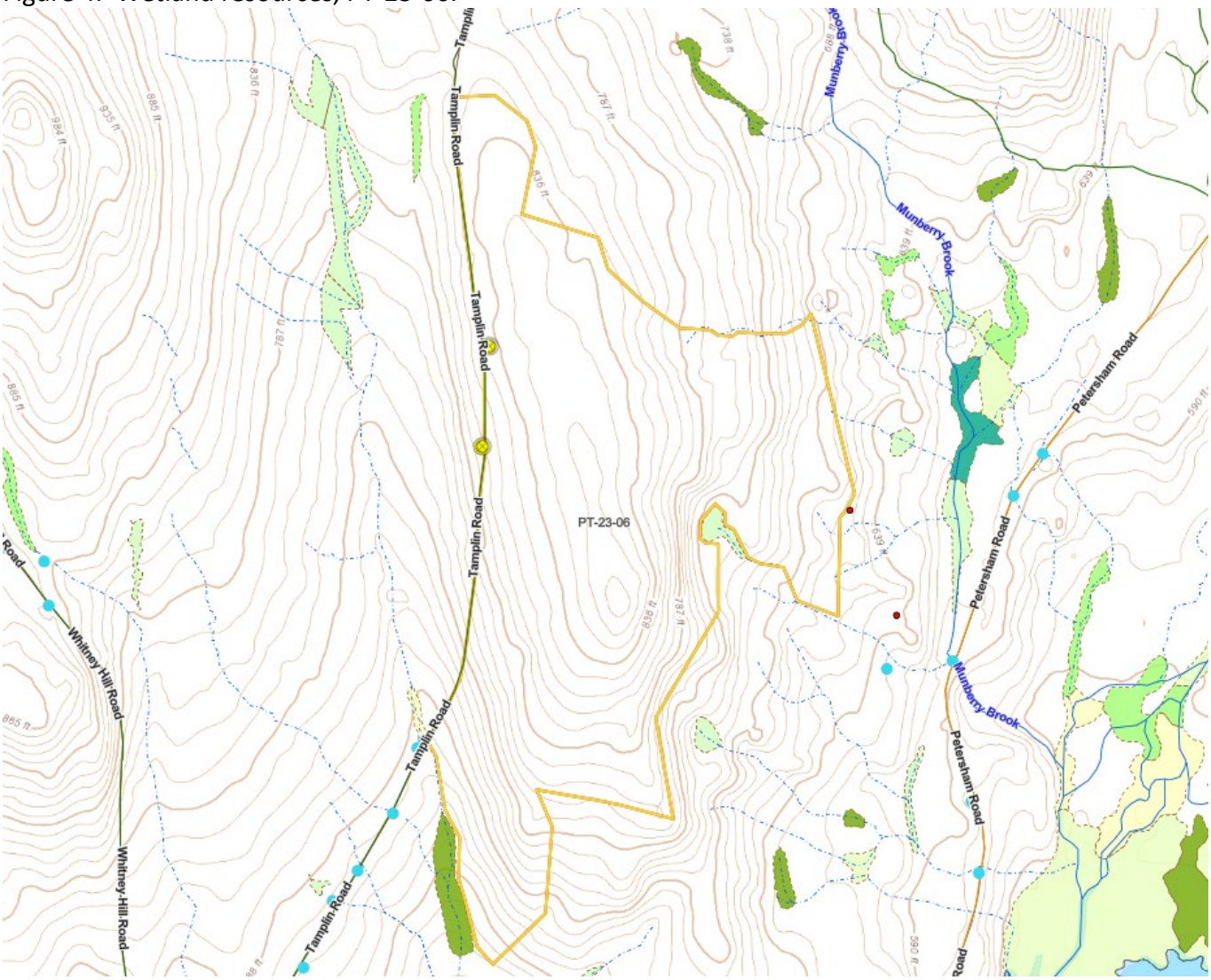


# Wetlands

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

Interior of lot is mostly dry. Southwest edge of lot is a stream which crosses Tamplin Road and flows SE into a wetland and eventually drains into Pottapaug Pond. There are also 2 small stream complexes which originate out of base of hill along the eastern edge of proposal. There are 2 verified vernal pools (937 and 938) to the east of the lot, one may be within 200' of area to be cut.

Figure 4. Wetland resources, PT-23-06.



# Silviculture

Acres in Intermediate cuts: **10**
Acres in prep/establishment cuts: **60**
Acres in Regeneration cuts: **35**
Average regen opening size: **1**
Maximum regen opening size: **3**

## Description of advance regeneration in proposal area:

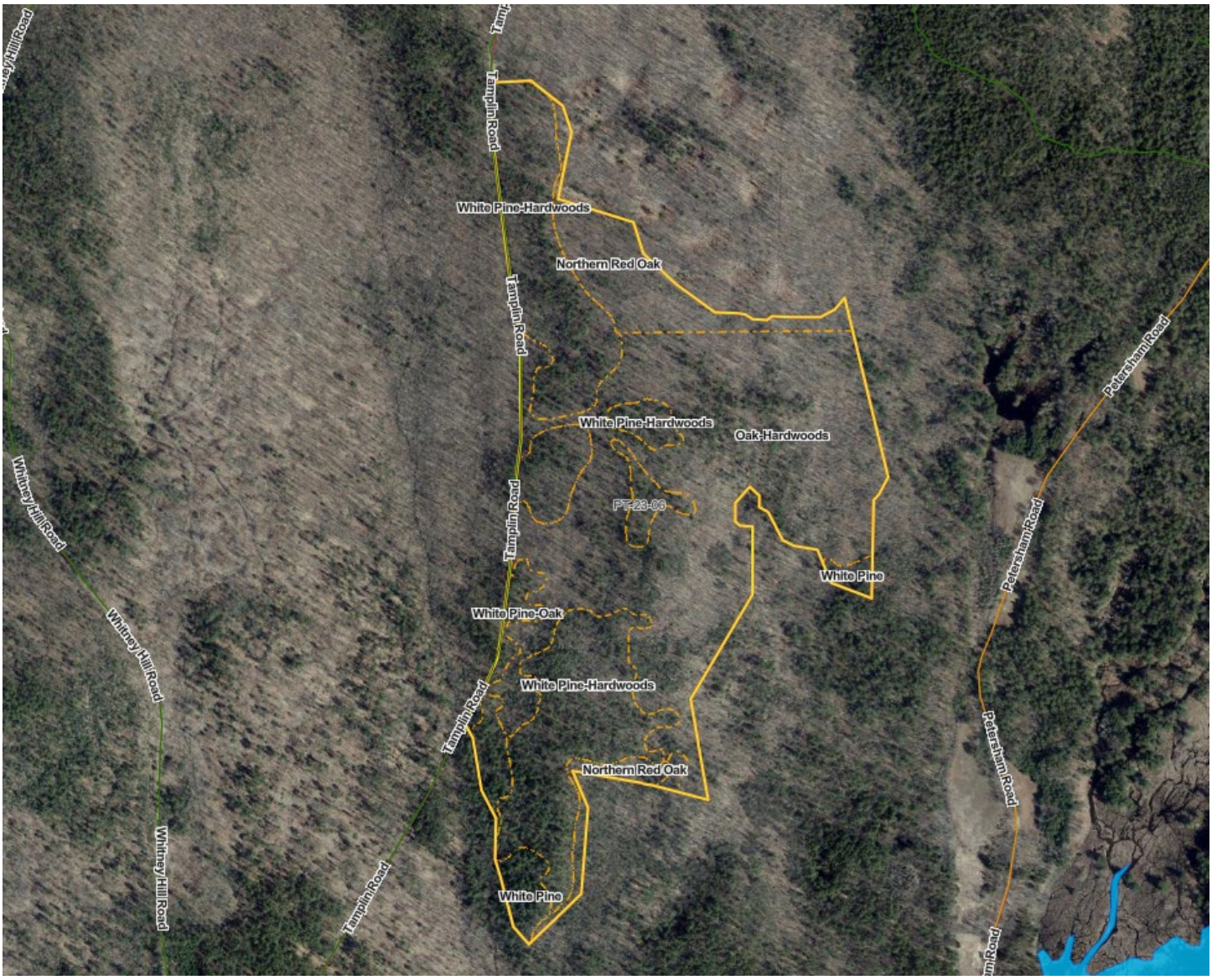
Most of lot is moderately stocked with mainly sapling size black birch and/or white pine and pine in particular has become stunted and stagnant. Red maple and beech are also common with scattered oak though more oak regeneration was noted along some of the lower slopes on east side. There is also some hemlock near the wet areas here and to the south where there is a small stand of WK. There is some larger sapling to pole sized black birch in a few of the larger openings created in the past.

## General comments on silviculture proposed:

Intent is to regenerate about 1/4 of this area with our standard regeneration opening silviculture. Openings will be spaced and stocked as required and will range from about 1/4 ac-3 acres. Existing openings will be expanded upon when they have vigorous regeneration to further release the regeneration and create space for new regeneration. Other areas to be targeted for harvest include sections with more poorly formed or less vigorous or diseased stems including stems severely impacted by gypsy moth. Additional openings will be created where more diverse hardwood seedling to pole size currently exists with intent of releasing or coppicing them. Areas with younger, better formed, vigorous stems will be avoided or thinned if overstocked. Edges of openings and along skid trails will also be thinned to allow more light into openings and lessen future damage to regeneration when next harvest occurs. Some areas with evenly spaced well formed stems may end up looking more like a prep or seed cut in a shelterwood. Exceptional individuals of all species present will be retained for diversity, as will active den trees and additional trees for habitat as deemed desirable. Additional large legacy trees will be retained.

**Climate Change considerations:**

Figure 5. Orthophoto and cover types, PT-23-06.

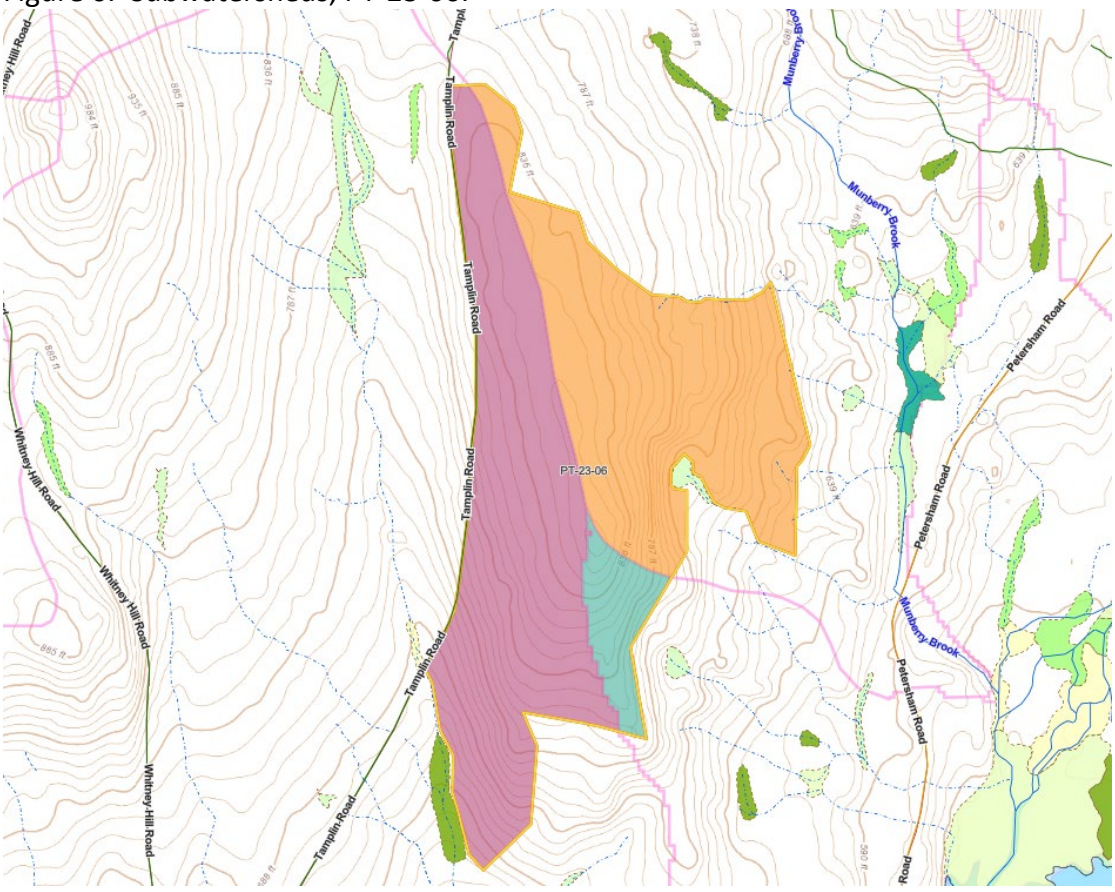


# Subwatershed Analysis

| 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 |
|---|---|---|---|---|
| 53 (Whitney Hill Souteast) | 936 | 54 | 180 | 69 |
| 41 (Mary Tamplin Drainage) | 739 | 6 | 179 | 63 |
| 28 (Pottapaug Shoreline West) | 846 | 0 | 211 | 9 |

None of the sub-watersheds are approaching their 25% limit although 41 and 53 also are on an uncompleted proposal (PT-19-5) which is adjoining this lot to the northwest but is on other side of Tamplin Rd. It is not expected that regeneration acreage will exceed 1/4 of lot acreage for either proposal (35 and 17 acres) so still less than half of allowed acreage will be regenerated. On this proposal openings will most likely be evenly spaced throughout. On PT-19-5 openings will mainly be in the southern part and northern edge so mainly within sub-shed 53 which has higher acreage remaining.

Figure 6. Subwatersheds, PT-23-06.



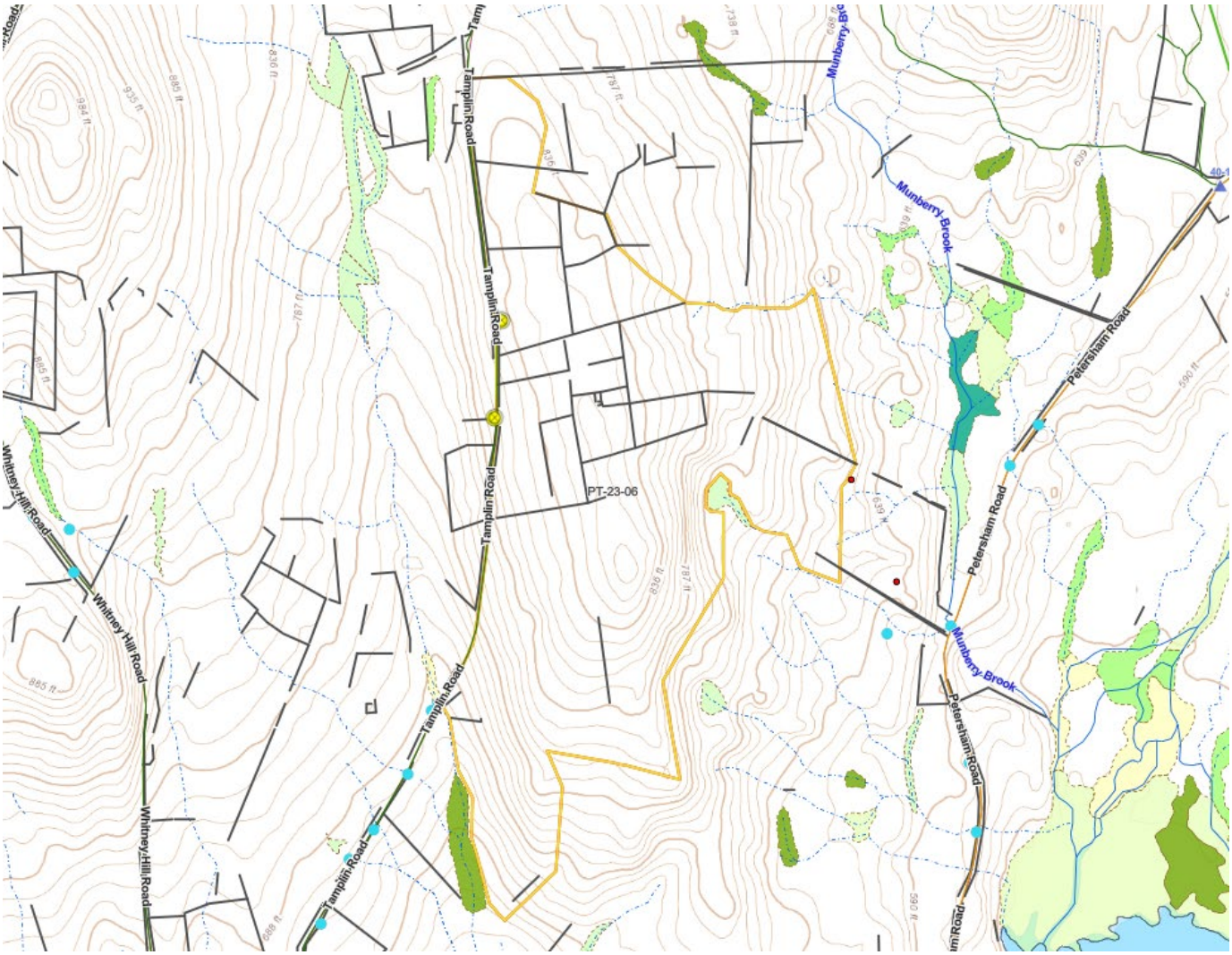
# Equipment

Forwarder required: **No**
Feller/processor required: **No**
Steep slopes present: **No**

**Comments on harvesting limitations:**

There are a couple of steep sections on the lot but these will be mostly avoided, not expecting to need to put a skid trail on them. The southern landings are all smaller road side type landings so a forwarder would be useful for loading trailers. Also there are many stone walls on the upper 1/2 of the proposal. The northern most landing was improved to allow trailers to turn around and will probably be the main landing but at least one of the southern ones will be needed due to long up hill skid to get to the northern one.

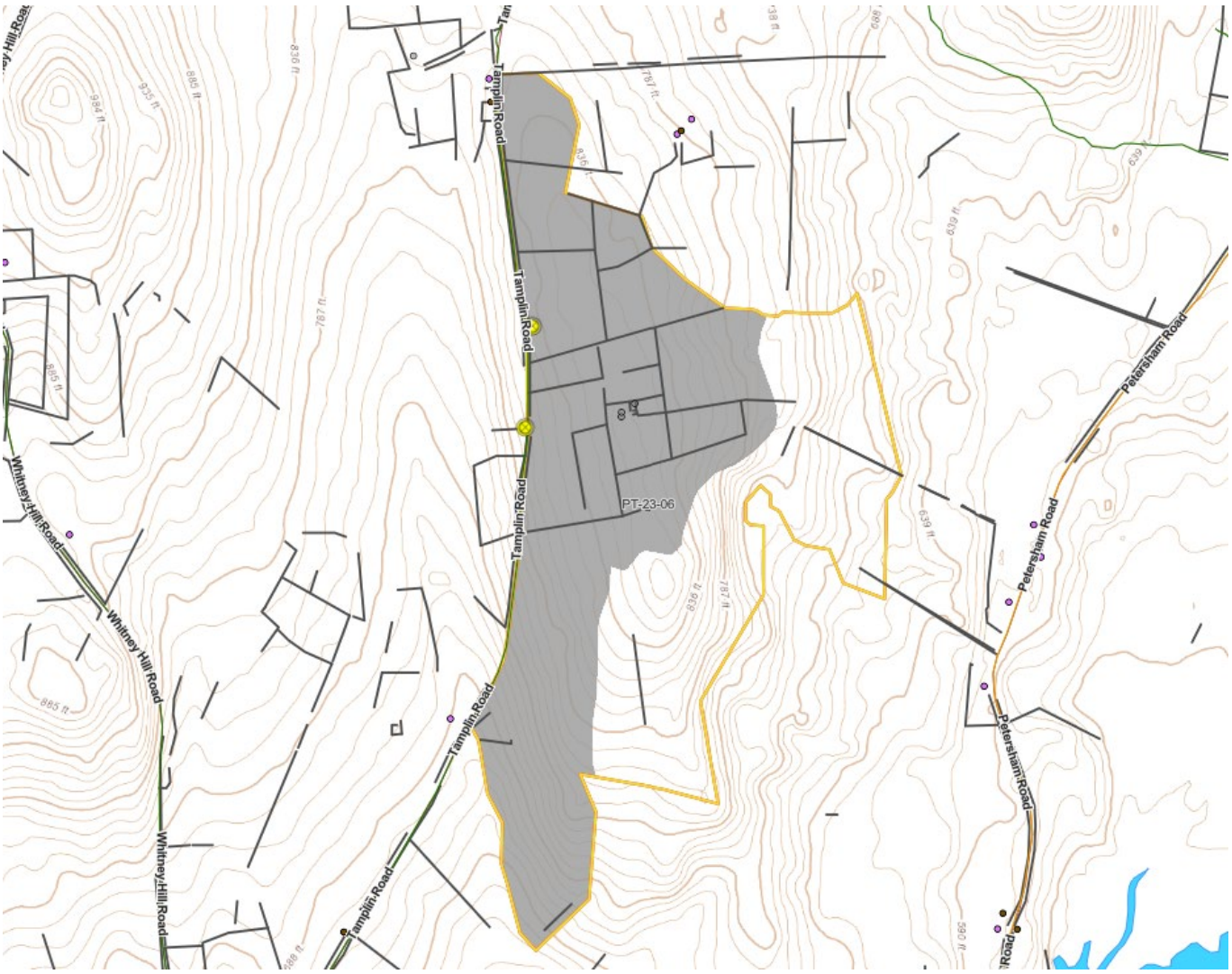
Figure 7. Harvesting limitations, PT-23-06.



# Cultural Resources

**Comments on Cultural Resources:**
Numerous stonewalls present, mainly on the northern half of the lot. Barways are frequent with most being used for logging access in past but some will need to be widened for current equipment. As long as the landings proposed (all have been used in past) can be utilized few if any new barways will be needed. Most of the walls, other than right around the area of foundations, are of the low, tossed variety. Every effort will be made to protect walls and minimize new breaks. Foundations, wells etc. will be protected during harvesting operations and will be flagged. There is at least one area that appears to have had surface stone mined from a ledge outcrop. Surface stone is somewhat variable but generally prevalent throughout. Sections of main skid trails that have softer soils will be armored with slash to limit rutting.

Figure 8. Stony and Extremely stony soils, PT-23-06.



# Wildlife Resources & Rare and Endangered Species

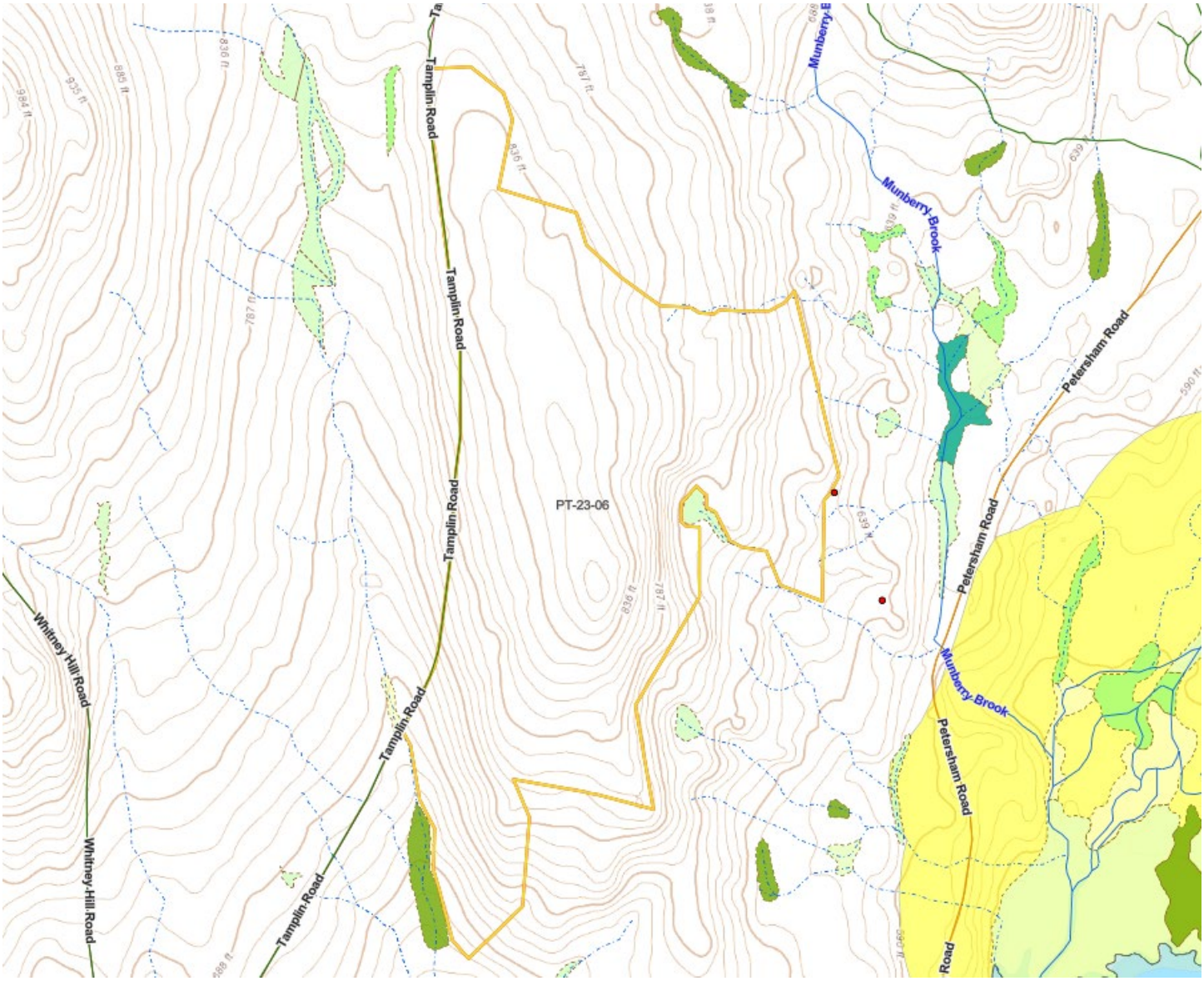
**General Wildlife Comments:**

Deer, moose, coyote and turkey are known to frequent the area. Beavers have impacted the northern wetland but are not believed to be currently active here now.

**Comments on Rare Species/Habitats:**

There are 2 verified vernal pools to the east of the lot, one may be within 200' of area to be cut. There is a stand of hickory-hophornbeam which could be a rare natural community type. It was identified in 2019 and observed by forester Wood to be an area that most likely wouldn't be cut due to steepness of slope and unusual species mix. The hickory-hophornbeam natural community is ranked as S2 (imperiled).

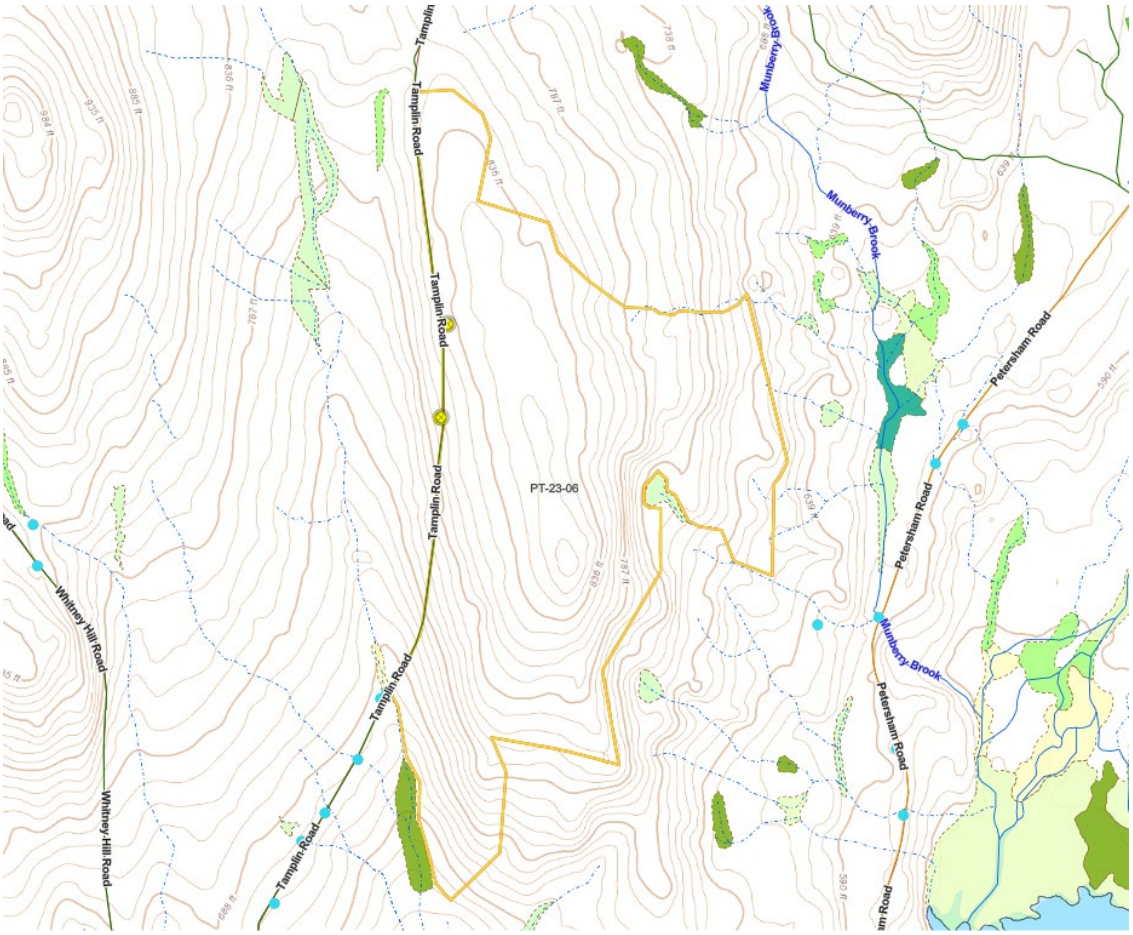
Figure 9. NHESP Priority habitat overlay, PT-23-06.



# Environmental Quality Engineering

**Comments on EQ Issues:**
No crossings required or EQ concerns.

Figure 10. Access planning, PT-23-06.




# Forest Access Engineering

**Gravel needed:** Yes
**Landing work needed:** Yes
**Culverts needed:** No
**Work needed on permanent bridges:** No
**Beaver issue:** No

**Further comment on access needs:**
Tamplin Road could use some grading and possibly additional drainage work back towards Dana Common.

Figure 11. DWSP FY 2023 Forestry Proposals – Master Legend for story maps