Quabbin Harvest Proposal HA-23-12E

Proposal Update, May 2024:

This forestry proposal was originally approved through the public process in 2022. At that time reference was made to salvaging or pre-salvaging planted red pines that were in decline due to fungal pathogens and/or red pine scale. DWSP wishes to clarify that all red pine plantation removals on Division lands comply with long standing DWSP management objectives to convert monoculture conifer plantations to diverse mixes of native tree species. 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 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.

Proposal Goals

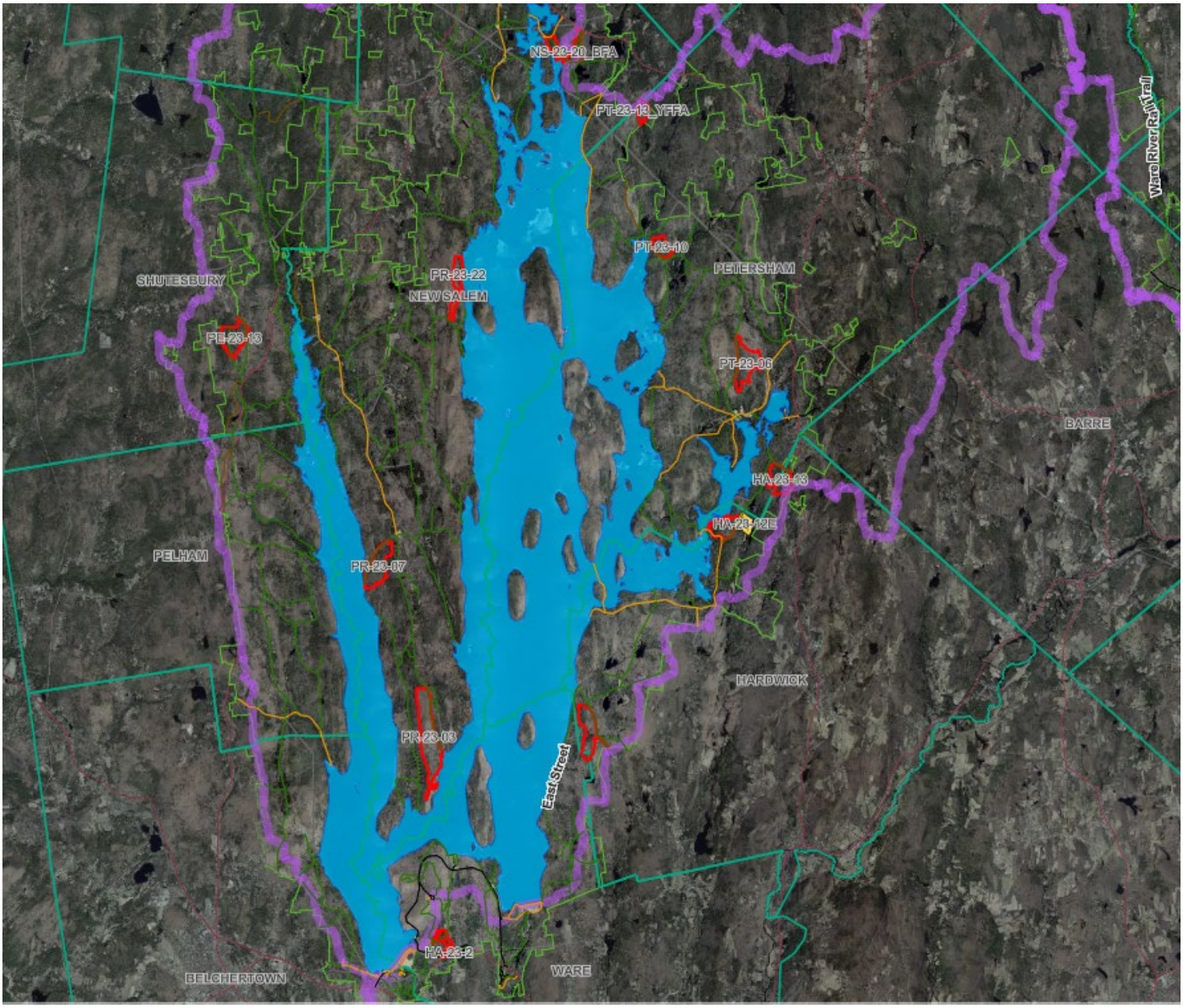
This proposal area is mainly a red pine plantation which is infested with red pine scale and is declining and will be salvaged. Adjoining white pine types will have openings between 1/3 to 2 acres created which will further diversify the age structure while improving vigor and overall form of the retained trees.

Proposal Location

(Yellow highlighted polygon in the map) East side of Carter Road starting at southern edge of previously treated red pine plantation before the large wetland. Runs SE to a wall, follows wall north to a junction then heads easterly along wall and then height of the land to a beaver pond, northerly along beaver pond to a wetland and then another beaver pond to where a small stream comes into pond, then head NW through a pine stand back out to Carter road, SW along Carter Road back to starting point.

Total Acres: 27

Figure 1. Watershed Locus, HA-23-12E.



General Description

Overstory Type(s)	Acres
Red Pine	8
White pine	17

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

Description of forest composition/condition:

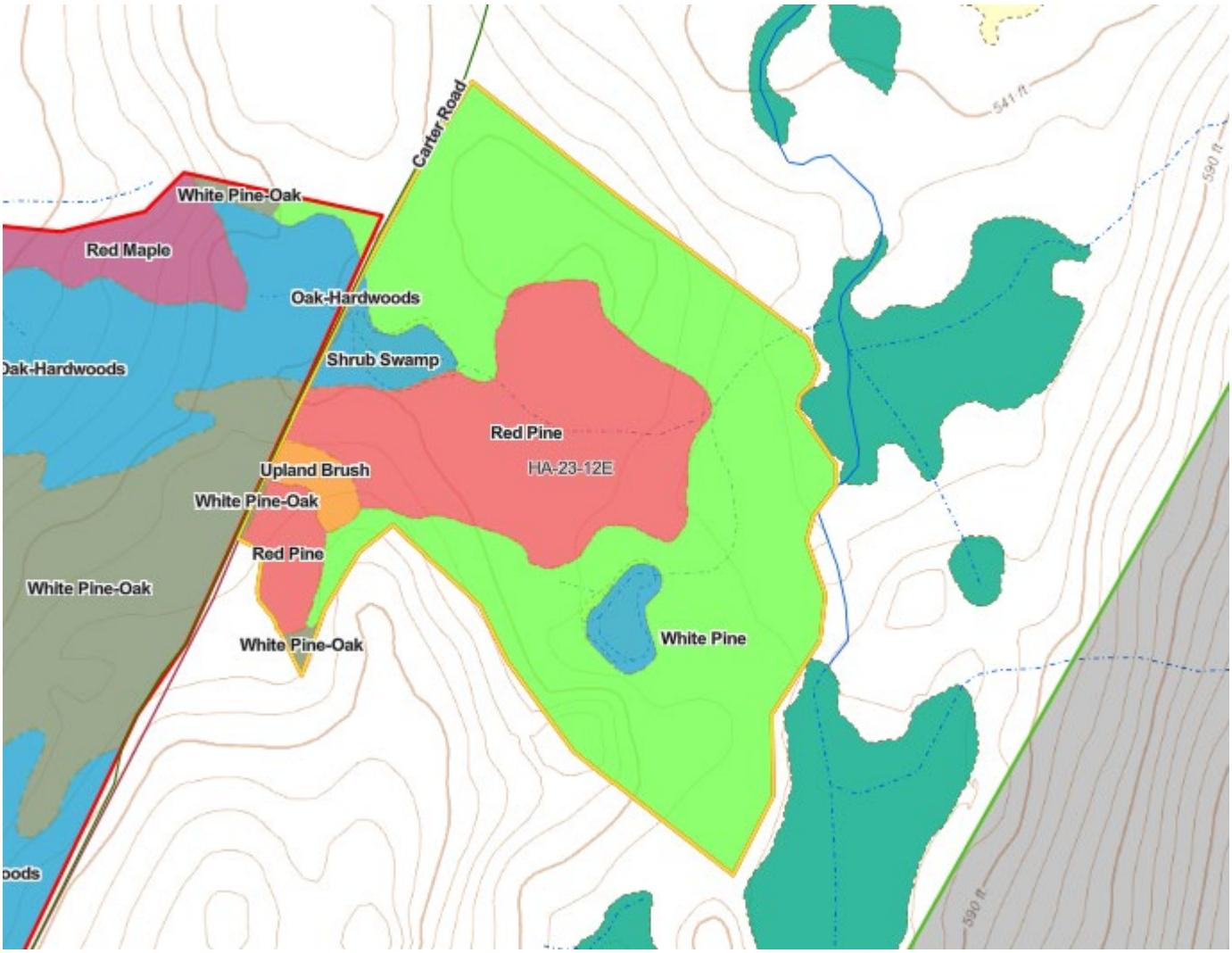
The red pine stand has been cut at least twice and is in poor shape due to red pine scale and probably root rot. Many stems are already dead and unmerchantable. Grape vine is also becoming established in some sections. Other species in overstory are white pine, red maple, black cherry and scattered oaks. Many of these other species are poorly formed or damaged. The understory and midstory is mostly black birch and white pine though many of the white pine are dropping out due to competition and/or diseases such as needle casts.

The other stand is mainly white pine and generally is in better shape but still has a large component of stems with poor form and/or low vigor. Understory is a similar mix of white pine, black birch, red maple with some oak and cherry and some hemlock in back towards the beaver ponds. There aren't many vigorous poles here as the stand didn't have any openings created.

Assessment of Terrestrial Invasive Species:

Japanese barberry, bittersweet and honeysuckle are thick around and on the southern landing and along some of the wetlands and are starting to get established on the northern landing. Also some rose scattered through the red pine stand and vinca is still present in one area. Additional spread from the landing area is a concern as regeneration was impacted around the landing and bittersweet is climbing to the tops of some of the red pine. Ideally landings can be treated to control invasives before logging starts. Since the red pine is dying the invasives are going to be released anyway.

Figure 2. Forest cover types, HA-23-12E.

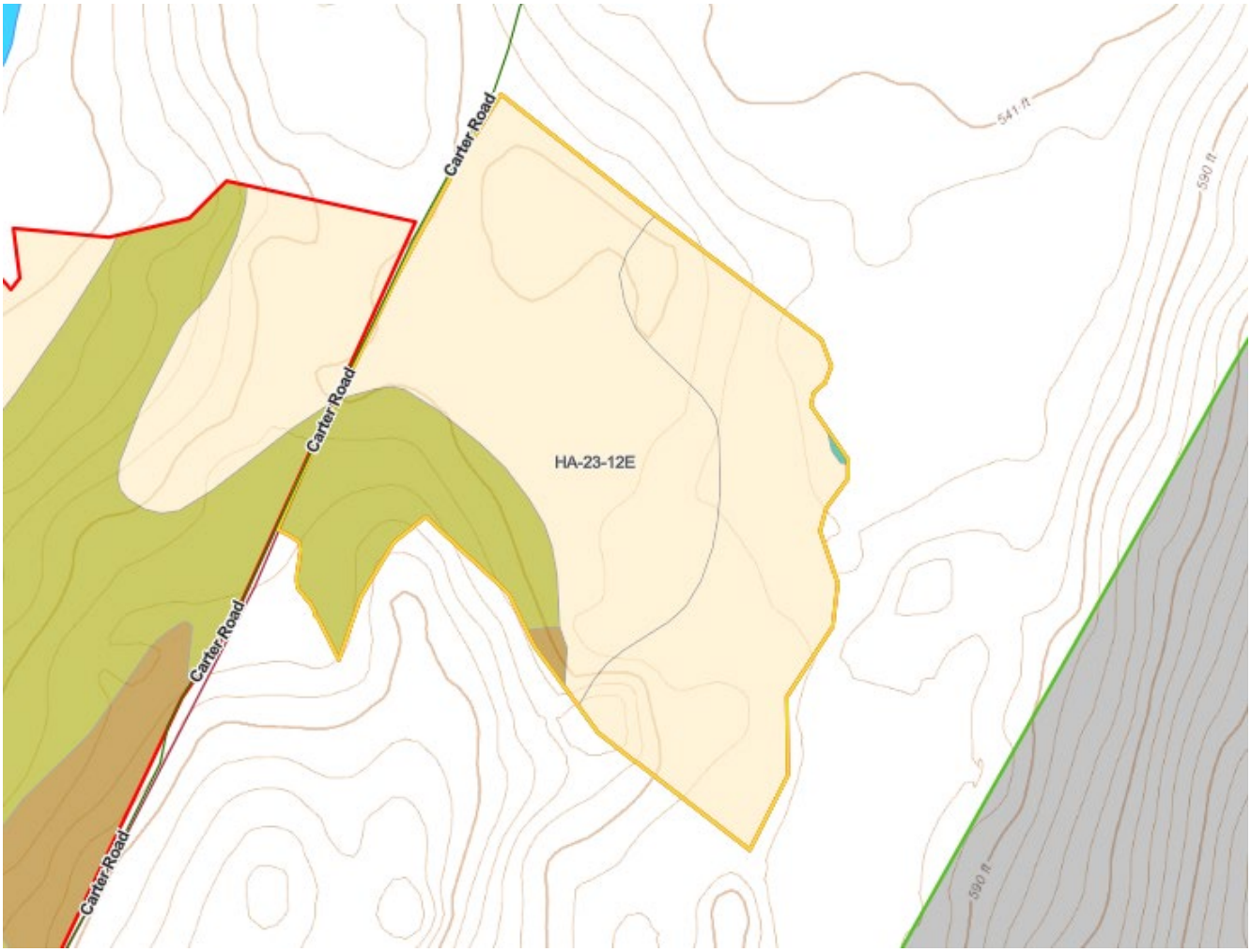

Carter Road
541 ft
590 ft
590 ft
White Pine-Oak
Red Maple
Oak-Hardwoods
Shrub Swamp
Oak-Hardwoods
Red Pine
HA-23-12E
Upland Brush
White Pine-Oak
Red Pine
White Pine-Oak
White Pine-Oak
White Pine
oods

Soils

Drainage Class	%
Excessively Drained	83
Well Drained Thin	0
Well Drained Thick	17
Moderately Well Drained	0
Poorly to Very Poorly Drained	0

4.5 acres of Montauk-Scituate-Canton, 9.8 acres of Hinckley loamy sand, and 12.7 acres of Merrimac fine sandy loam.

Figure 3. Soil classes, HA-23-12E.



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** **(Riparian Zone Mgt)**
- Is logging in wetlands planned? - **No**

Wetlands are all associated with the two small streams. Two large beaver ponds abut the proposal to the east.

There is 1 Verified Vernal Pool 861 located in the northeast section of the lot. Potential VP 806 is not a vernal pool. There is one VVP 41 just outside of the west boundary and across the road. VVP 41 is within the boundary of forestry lot HA-23-12W.

Figure 4. Wetland resources, HA-23-12E.

Silviculture

Acres in Intermediate cuts: **8**
Acres in prep/establishment cuts: **9**
Acres in Regeneration cuts: **9**
Average regen opening size: **1**
Maximum regen opening size: **5**

Description of advance regeneration in proposal area:

Regeneration is the typical black birch/white pine response that occurs in thinned red pine stands, except for the area immediately around the landing which is dominated by invasives. Size ranges from seedling to poles of around 8" diameter. Other species present are red maple, black cherry, black, red and white oak, and some hemlock mainly in the back near the beaver pond. Regeneration density and size are variable due at least partly to the timing and intensity of past harvests.

General comments on silviculture proposed:

Small (1/4 - 5 acre) group selection is proposed. Most of the area in between the openings will be thinned. For the most part groups will be in areas with the lowest vigor and/or poorest form. In determining group location consideration will also be given to terrain and how the next entry will be done. While there is currently fairly good stocking of advance regeneration, it is not very vigorous due to the dense even-aged overstory, and oak in particular is lacking. Most of the poorly formed or storm damaged stems and most of the red maple, red pine and ash will be cut. This will further release the existing regeneration which is now over 10' tall. Across the whole proposal most of the dead snags and any trees with stick nests, dens or unusual wildlife habitat characteristics will be retained. For the most part areas to be thinned will be left fully stocked with residual basal area of 60-90 square feet depending on amount of white pine (areas of mainly white pine will have the higher BA).

Areas with at least 40 square feet of basal area of well formed and vigorous white pine, oak, hemlock, hickory, or black cherry may be treated more as a seed cut shelterwood to increase growth rate of residual trees (increase carbon sequestration) and allow for additional seed production.

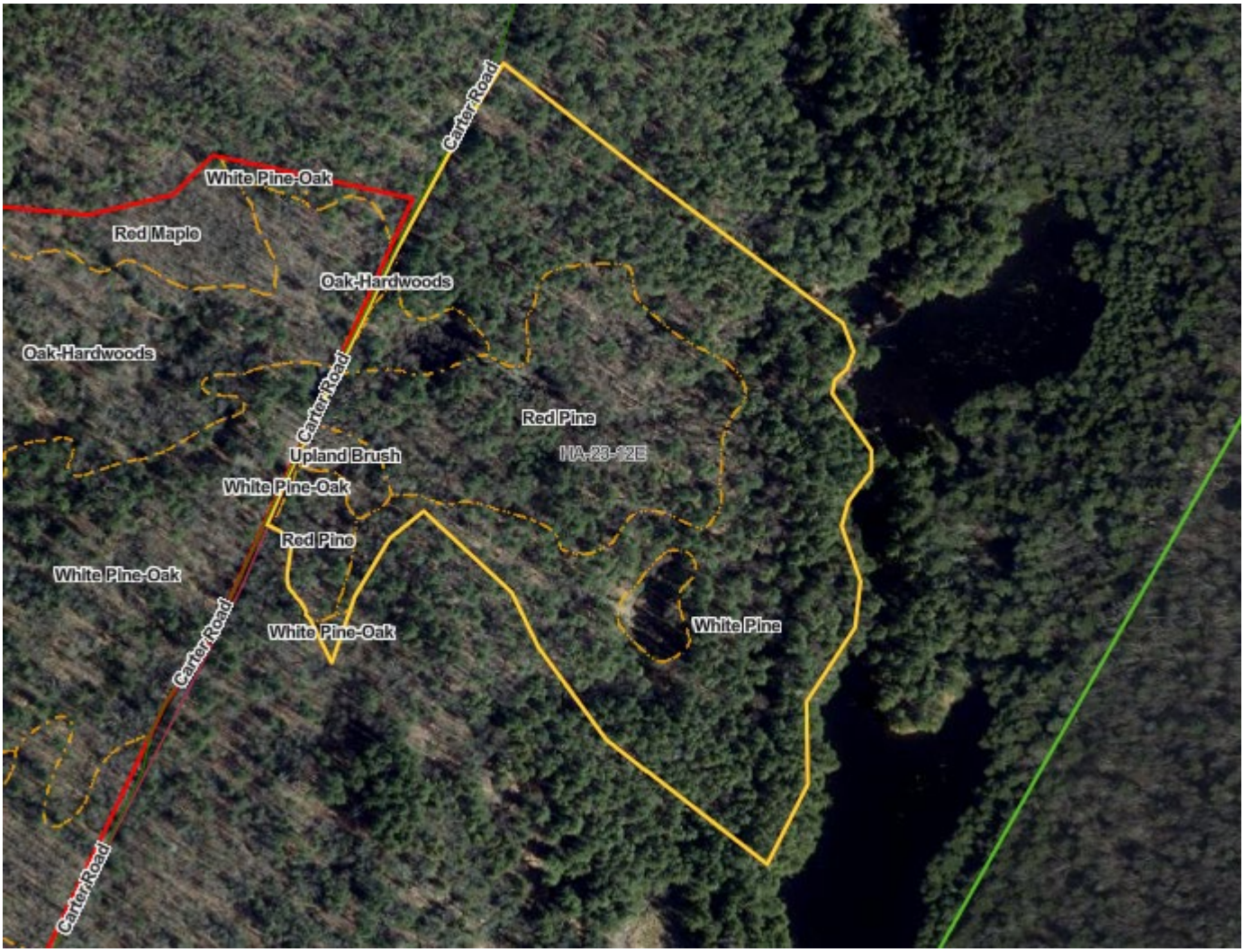
Intent is to regenerate approximately 1/3rd of this lot through the creation of openings mainly 1/3-2 acres in size. Openings will be irregularly shaped other than where a stone wall is an edge. 5-20 sq ft of basal area will be retained in openings over 0.5 ac.

The red pine stands have been cut twice before so there is already dense regeneration under most of these. Established acceptable regeneration will be protected as much as possible, but some of this has gotten stagnant and some has been storm damaged or is so whippy that it will be susceptible to future damage; such regeneration will be considered unacceptable.

Climate Change considerations:

Resiliency improvement by removing dying and diseased red pine, poor quality white pine, and releasing diverse advance hardwood regeneration. Thinning the areas between openings to retain good quality residual trees will improve growth rates (and carbon sequestration).

Figure 5. Orthophoto and cover types, HA-23-12E.

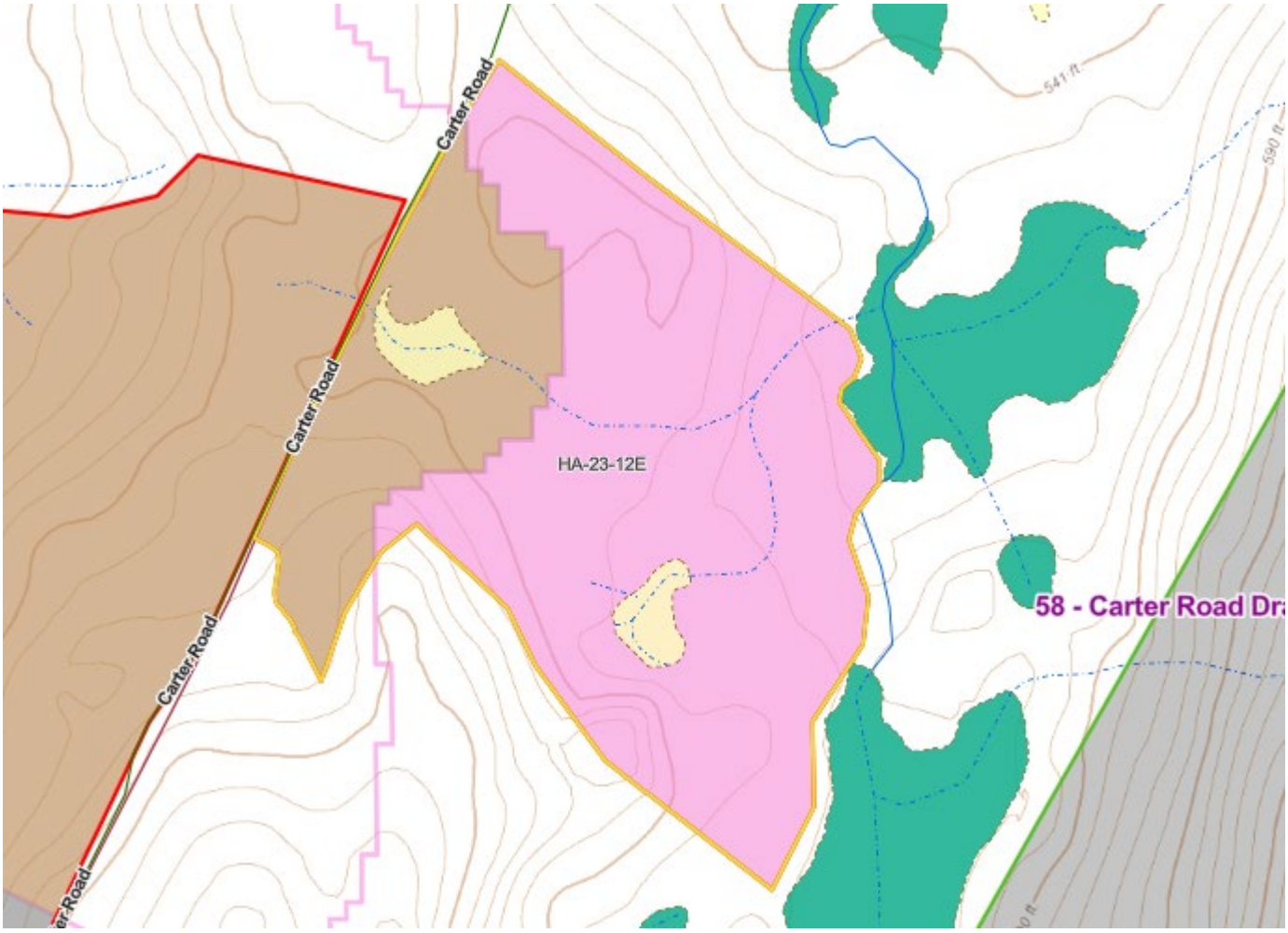


Subwatershed Analysis

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
1 (Pottapaug East Shoreline)	521	8	123	7
58 (Carter Road Drainage)	420	7	98	20

The proposed harvesting levels will not exceed the 25% threshold.

Figure 6. Subwatersheds, HA-23-12E.



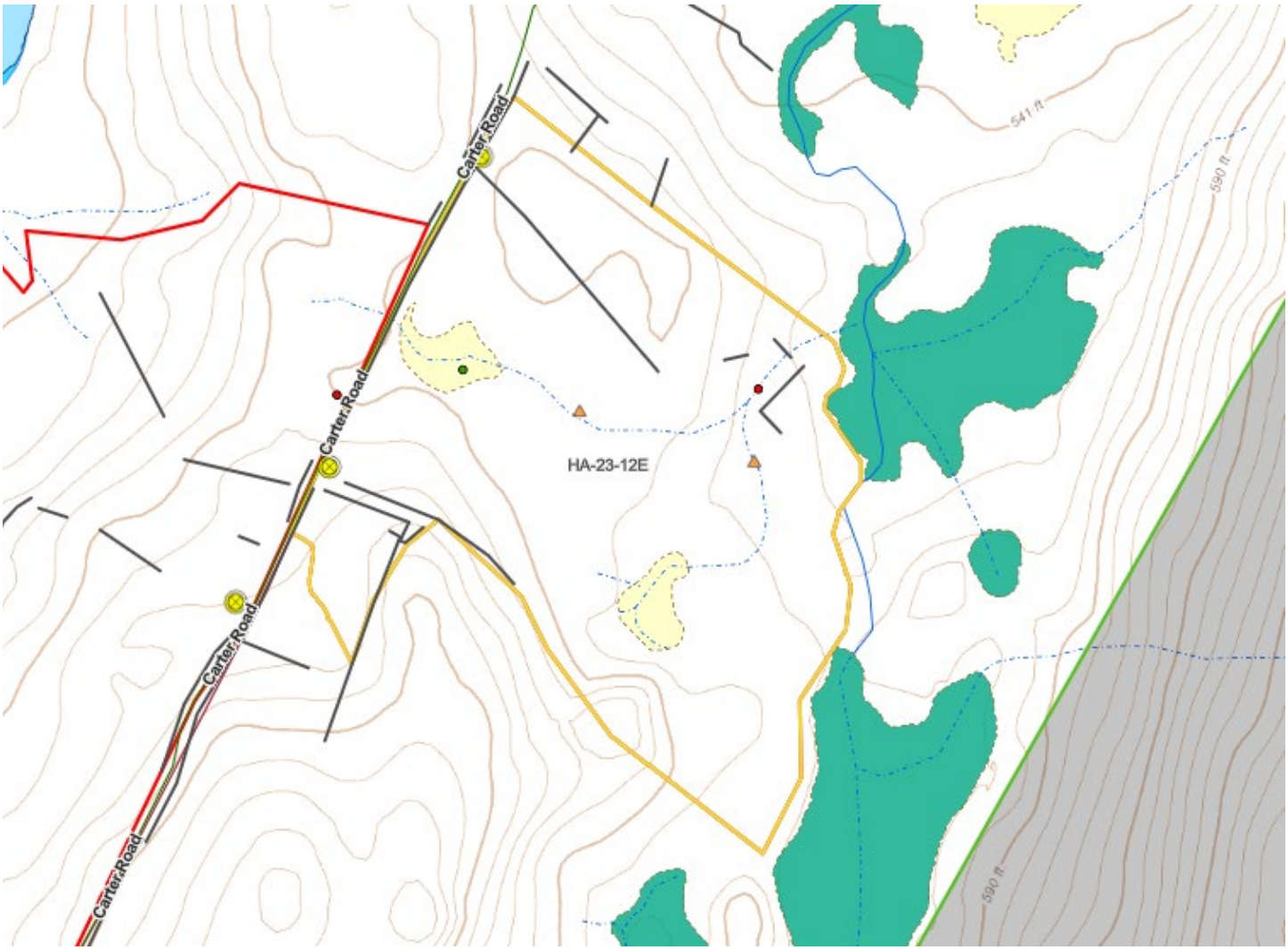
Equipment

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

Comments on harvesting limitations:

No equipment restrictions should be needed though care will need to be taken not to damage wet areas and especially the vernal pool buffer.

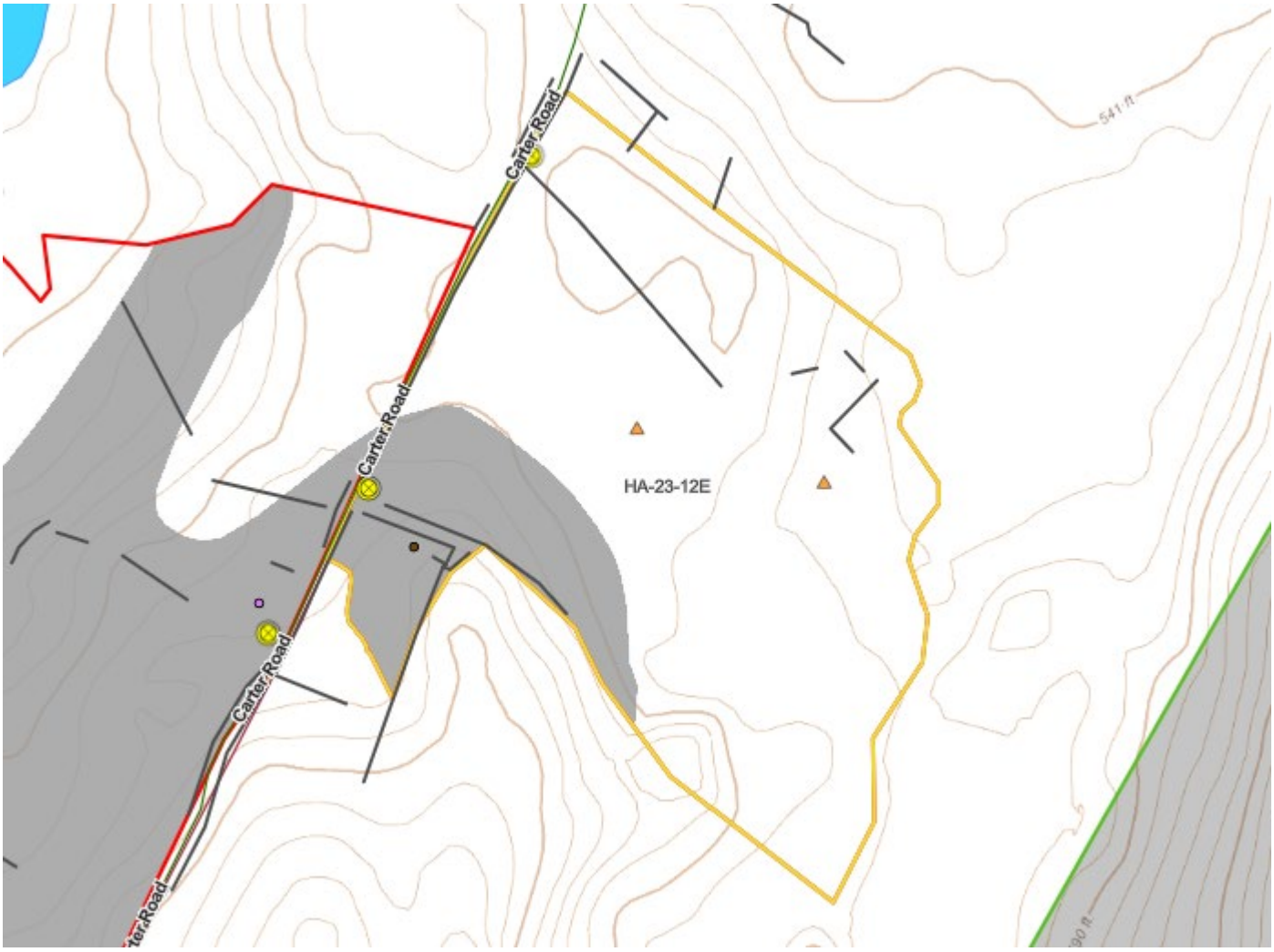
Figure 7. Harvesting limitations, HA-23-12E.



Cultural Resources

Comments on Cultural Resources:
Well location has not been found yet but at least one is assumed to be present. Historic features such as stone walls and cellar holes will be avoided and/or protected as per current DWSP policy. Almost all the proposed area has been logged at least once during last 30 years and appears there are barways sufficiently wide to allow modern equipment access with minimal disturbance to them. If such a barway doesn't exist, if possible the wall will be crossed where previously disturbed or at a section that is low and made of tossed stone. Features that may get obscured by snow or vegetation will be flagged. Main skid trails with unstable soils will be armored with slash to avoid excessive rutting. If applicable, DWSP will follow any additional recommendations from DCR's Archaeologist regarding protection of sensitive sites.

Figure 8. Stony and Extremely stony soils, HA-23-12E.



Wildlife Resources & Rare and Endangered Species

General Wildlife Comments:

Coyote, bear, bobcat, deer, raccoon, turkey, grouse, and moose are some of the larger species known to inhabit this area. No large stick nests were noted but if any are found the trees they are in will be retained.

Comments on Rare Species/Habitats:

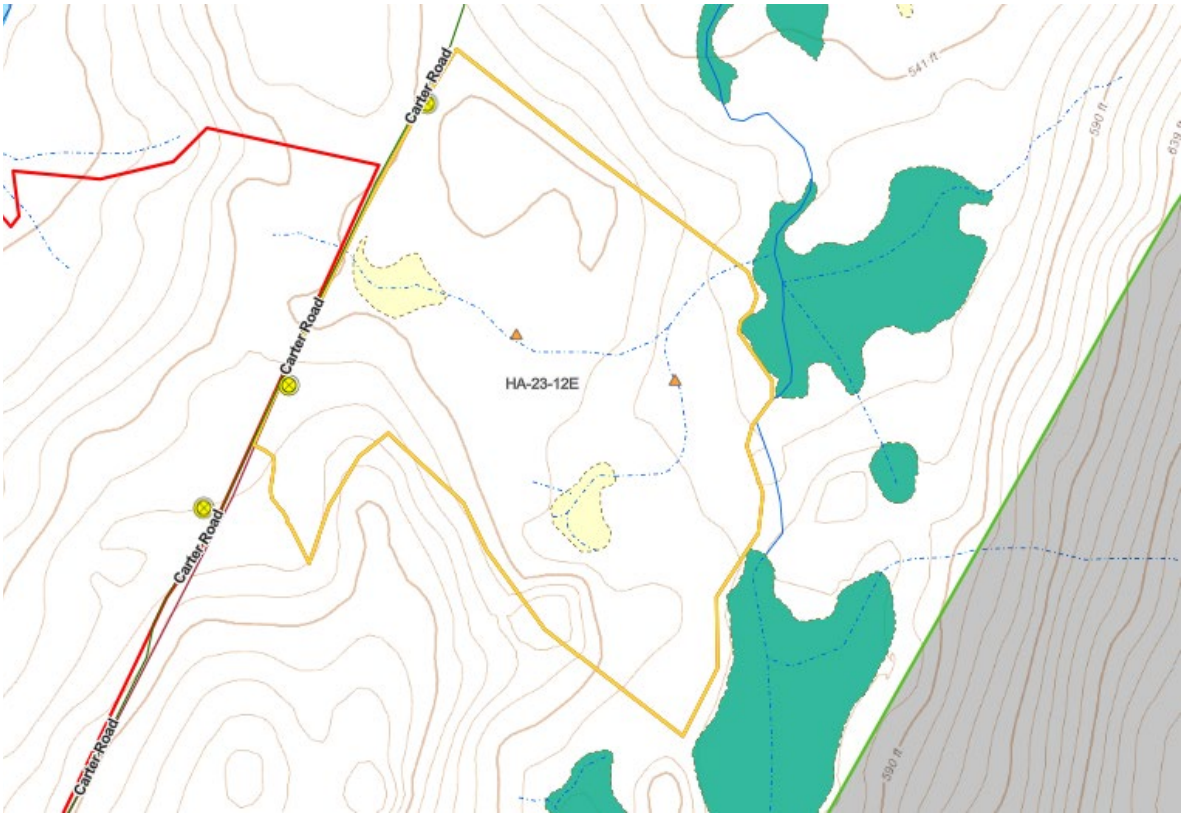
See Wetlands description for vernal pool information. No NHESP habitats within proposal area.

Figure 9. NHESP Priority habitat overlay, HA-23-12E.

Environmental Quality Engineering

Comments on EQ Issues:
One of the intermittent stream crossings probably won't be needed due to having two landing sites. No EQ concerns.

Figure 10. Access planning, HA-23-12E.



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:

Culvert should be added to road just south of southern landing to keep water from flowing down Carter Road (road improvements may have occurred by the time of public comment period). Both landings have piles of road scrapings that need to be removed. Landings may need bank run gravel or stone added.

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