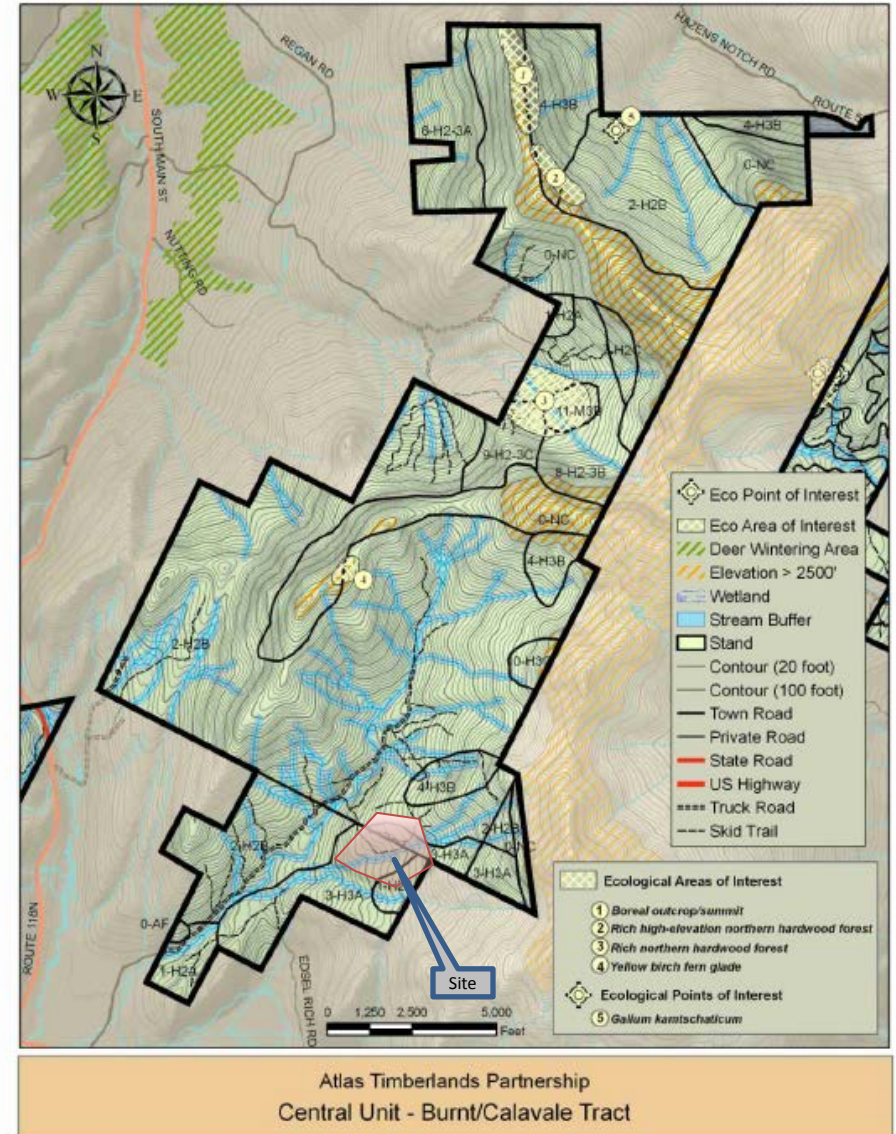


## ATLAS TIMBERLAND PARTNERSHIP—BACKGROUND

Landowners: Vermont Land Trust, Vermont Chapter-The Nature Conservancy  
 Acquired: 1997; 26,000 acres. (roughly 3,000, non-core acres sold in 2007)  
 FSC certified (TNC Group Certificate)  
 Overall ownership objective: manage for timber while protecting biodiversity

Harvest Area:	1,200 acres (approx.)
Natural Community Types:	Northern Hardwood Forest
Past Management History:	Timber harvests within the past 20 years
Dominant soils:	Woodstock-Rock Outcrop, Peru Ex. Stony Fine Sandy Loam, Stowe Ex. Stony FSL
Parent materials:	Glacial till
Terrain:	Moderate to steep, 339 acres >45% slope
Elevation:	1000 to 2500
Size Class:	Small sawtimber, approx.: 1,500 bf/ac
Stand Structure:	Two-age
Total Basal Area Per Acre:	77-100 sf, ~50%f acceptable
Trees Per Acre:	191
Quadratic Mean Stand Diameter:	8.6
Basal Area of AGS Sawlogs:	21
Timber Quality:	Fair to Poor, heavy beech in areas
Operability	Preferably winter
Access and landing area:	Primary access: main truck rd from Rt118.
Skid distance:	Up to 2 miles – main skid roads need to be upgraded to expedite skidding time.
General maintenance:	Riparian crossings, numerous
Brook-wetland crossings:	Temporary bridge needed.
Objectives	Short-term: improve quality, size, value. Maintain and enhance ecological attributes. Increase structural complexity. Long-term: high quality sawlog production, uneven aged structure.
Silviculture:	Various: small patches, group selection; shelterwood with reserves, variable-retention thinning
Equipment:	Cut-to-length, feller-buncher, forwarder, grapple skidder

## BURNT/CALVALE TRACT — 5,493 TOTAL ACRES



## SUMMER VS. WINTER OPERATIONS—ESTIMATED COSTS

### WINTER HARVEST

Task	Cost estimate	Notes
<u>Lower Truck Road</u>		
Fill/elevate—500' along wetland	\$4,500.	Material from ATP pit
Armor ditches	\$1,000.	
Stone 2 crossovers	\$1,000.	Shot rock
<u>Upper Truck Road</u>		
Cut back brush/trees	\$1,500.	
Ditching, stumping, widening	\$3,000.	
Replace culverts (3)	\$2,000.	
Stone crossover (1)	\$ 500.	
<u>Misc.</u>		
Skid road construction (main)	\$500.	
Plowing	\$500.	
<b>TOTAL (Winter)</b>	<b>\$14,500.</b>	

### SUMMER HARVEST

Task	Cost estimate	Notes
<u>Lower Truck Road</u>		
Fill/elevate—500' along wetland	\$4,500.	Material from ATP pit
Armor ditches	\$1,000.	
Stone 2 crossovers	\$1,000.	Shot rock
<u>Upper Truck Road</u>		
Cut back brush/trees	\$1,500.	
Ditching, stumping, widening	\$3,000.	
Replace culverts (3)	\$2,000.	
Stone crossover (1)	\$ 500.	
<u>Harvest Area</u>		
Portable skidder bridge	\$5,500.	Custom: steel, welding
Bridge abutments	\$1,000.	Concrete block
Decking	\$1,500.	Re-use, if possible
Installation	\$1,500.	
Job layout time (additional)	\$2,500.	
<u>Misc.</u>		
Skid road construction (main)	\$5,000.	
Pre-harvest waterbars	\$3,000.	
<b>TOTAL (Summer)</b>	<b>\$33,500.</b>	

## CLIMATE ADAPTATION APPROACHES AND TACTICS

Adaptation Approach	Tactic	Notes
<ul style="list-style-type: none"> <li>▪ 5.2 Species diversity</li> <li>▪ 9.1 Favor future-adapted native species</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain spruce, white pine and black cherry</li> <li>▪ Try to discourage beech</li> <li>▪ Summer harvesting will promote YB</li> </ul>	Routine
<ul style="list-style-type: none"> <li>▪ 5.4 Retain biological legacies</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain coarse woody debris</li> <li>▪ Larger top-logging diameter threshold for larger trees.</li> <li>▪ Mark more cut-to-leave trees</li> </ul>	Routine, but perhaps leave tree target numbers need to be revisited?
<ul style="list-style-type: none"> <li>▪ 1.1 Reduce impacts to soil and nutrient cycling</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reduce site impacts by using tracked equip. as much as possible, but especially on summer ground.</li> </ul>	Will require more attention to road design
<ul style="list-style-type: none"> <li>▪ 4.2 Sensitive and at-risk communities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Map, monitor, take care in when these areas are included in harvest areas.</li> </ul>	No specific areas from Heritage survey. Numerous seeps, some enrichment
<ul style="list-style-type: none"> <li>▪ 5.1 Age class diversity</li> </ul>	<ul style="list-style-type: none"> <li>▪ Revisit management plan targets for age class distribution</li> </ul>	We may consider increasing the area in even age transitional stands
<ul style="list-style-type: none"> <li>▪ 10.3 Re-align ecosystems to meet expected future conditions</li> </ul>	<ul style="list-style-type: none"> <li>▪ Explore the feasibility of expanding summer operations.</li> <li>▪ Prioritize most likely areas</li> <li>▪ Investigate road construction options</li> <li>▪ Monitor increases in costs for road and trail construction/closeout</li> <li>▪ Analyze cost benefit.</li> </ul>	Review proposed harvest areas (GIS, field) for road, slope, WQ issues. Layout proposed summer modifications. Set up any monitoring systems and analysis.