

UNITY MOUNTAIN

TRACT INFORMATION

- Total Acres: 596.3, according to tax map
- Map and Lot:
 - Map 2, Lot 321-1, 500 acres
 - Map 2, Lot 321, 96.3 acres
- Conservation Status:
 - Ownership by Sullivan County

OWNERSHIP DESCRIPTION

Location:

- Borders Marshall Pond tract to the east.
- Extends north to Claremont town line.
- Occupies western side of Unity Mountain.
- Connects to County Farm tract on southwest corner

General Description:

- The Unity Mountain tract is entirely forested and relatively remote. It also has seen the most intense level of historical management prior to County ownership, with heavy-handed silviculture and little attention to closing out roads and protecting soil and water quality.
- The forest is largely a mix of hemlock, spruce and hardwoods, with some white pine scattered about.
- There is some enrichment on lower slopes of the tract where the aspect shifts towards the north.
- Some sections of the ownership have not been recently treated, and are largely dominated by hemlock, spruce and northern hardwoods.
- Though not technically the height of Unity Mountain, the tract hosts a height of land on a southwest shoulder of Unity Mountain, with high elevation and perched wetlands.
- The tract is dominated by steep slopes in the northwestern sections, and more moderate, undulating slopes in the southeast area.
- The forest is two aged, with the dominant trees roughly 70 to 80 years old (though in some areas trees are older) with a second age class of trees less than 10 years old established in most recently heavily cut areas and about 25 years old in sections intensively harvested in the 1990s.

Access:

- The tract is accessed from the south over a right-of-way from Spooner Road, and from the east via the woods road on the Marshall Pond tract
- From the north, the tract has no direct access to a town road. A fairly remote landing in the northwest corner can be accessed by trucks across private land to Spring Farm Road.

Landing Sites:

- A series of potential landing sites exist on the truck road in from Spooner Road, most easily accessible from the south side of the height of land.
- Due to topography, the majority of the northern portion of the tract must utilize a landing in the northwest corner.

Operability:

- Operability here is variable, with slope being the primary limiting factor. The northwest slope of Unity Mountain is operable but very steep. Other areas include some very steep sections that can be operated around.
- There are few wetlands and streams here, and all can be operated around and protected using Best Management Practices and Riparian Management Zones.

Harvest History:

- Generally widespread harvesting in the 1990s, resulting in some sections of hardwood dominated pole stands today.
- The bulk of the tract was intensively harvested from 2008-2011.

Wildlife:

- Tract provides a diversity of wildlife habitat:
 - Perched high elevation wetlands, with spruce and sphagnum moss. Also stream and riparian habitat.
 - Large tract of relatively remote mixed forest, some sections around 80 years old, with some smaller areas of older trees.
 - Large amounts of early successional forest about 10 years old with abundant soft mast and browse.
 - Average to below-average amount snags, cavity trees and down logs.

Wetland and Water Features:

- Contains portion of 300' RMZ around Marshall Pond
- Some perched forested wetlands associated with spruce-fir shoulder of Unity Mountain
 - 150' (variable) Special Management RMZ- follow recommendations in GFGS
- Multiple streams
 - Several 1st and 2nd order streams
 - All streams have recommended 25' No Harvest RMZ
 - Follow BA law
 - 1st and 2nd order streams have recommended 100' Special Management RMZ- follow recommendations in GFGS

Forest Health:

- Invasive exotics, primarily glossy buckthorn but also Japanese barberry, multiflora rose etc. established along major trails/roads and extending into heavily cut areas.

- Health and vigor of spruce and fir threatened by effects from climate change. Transitional state will likely shift towards red oak and pine, especially in the mixed sites.
- Scattered beech have moderate to severe beech bark disease.
- Deer and moose browse moderate to heavy, especially on desirable species.

Cultural Features:

- Stone walls.

Recreation:

- Unity Mountain Trail traverses southern end of tract.
- Vista on Unity Mountain Trail at Sam's Lookout, primarily with views to the south and west.
- Portions of snowmobile trail maintained by Crescent Lake Snoriders snowmobile club runs along western boundary and out towards Spring Farm Road.
- Potential to improve section of trail up on height of shoulder, with possible additional views to the northwest.

Other:

- An abutting landowner on the west-side of the property is accessing the property with ATVs and building unauthorized trails, in defiance of posted signs and prior communication from the Natural Resources Department. Possible legal recourse may be needed to stop this encroachment.

TRACT LEVEL MANAGEMENT RECOMMENDATIONS

FOREST HEALTH:

- ASAP: Focus on treatment of invasives along major roads and trails. Ideally, perform spot-treatment in interior forest, especially in relation to timber harvest activities.

RECREATION:

- ANNUALLY: Maintain Unity Mountain Trail as needed.

ACCESS/BOUNDARY:

- As Needed: Paint boundary.
- ANNUALLY: Maintain gate and road off Spooner Road

STAND DESCRIPTIONS AND MANAGEMENT RECOMMENDATIONS

Stand Number: UM1

Stand Type: Red maple-yellow birch-white ash-white pine 3C/Red maple-beech-yellow birch-black cherry 1/2 A

Stand Acres: 306.8

Soils: Primarily IIA (shallow and rocky) with some IB (best for red oak and white birch) and small amounts of IA (best for high quality hardwoods) and IIB (spruce-fir).

Site: Generally well drained, shallow soils on moderate to very steep slope. Some rocky ground.

Forest Composition: The forest is patchy due to intensive harvesting, with the overstory generally occurring in pockets primarily including red maple, yellow birch, white ash and white pine of small to large sawtimber size. This stand also includes pockets of polesize hardwoods, dominated by red maple, white birch and beech from older intensive cutting that occurred in the 1990s.

Regeneration: In harvested openings, regeneration is a dense, vigorous mix of *Rubus* sp., beech, striped maple, red maple, some red spruce, black cherry and white pine. Browse impacts from deer and moose exist, but in general the regeneration is succeeding.

Natural Communities: Hemlock-Red Spruce-Northern Hardwood

Forest Health: Some decline in spruce and balsam fir. Beech bark disease common.

Stocking: Variable. Basal area ranges from around 140 in more dense patches to 20 in open areas. In general, the forest is largely understocked.

Timber Quality: This entire stand has been high graded. Residual timber quality is poor.

Wildlife Habitat: Despite the short-sited harvesting that occurred here, the positive effect is a large area of remote, mixed forest land with a high level of browse, soft mast, and dense young growth for shelter.

Water and Wetland Features: Several 1st and 2nd order streams cross this stand, draining south to Meadow Brook and eventually into the Little Sugar River.

Invasives: Multiflora rose and buckthorn especially associated with roads and trails near Marshall Pond, but also spreading into the forest. Becoming more scattered as you head towards Unity Mountain.

Past Management: Intensive harvest in 1990s and again between 2008-2011.

Other: Woods trails and skids, especially on the northwest slope of Unity Mountain were poorly laid out, going straight up and down the slope resulting in intense rutting and soil erosion. The trails were not closed out.

Management Objectives: This stand should be managed for a combination of timber and wildlife habitat. Ideally the skid trails would be properly closed out, but that likely isn't practical at this point in time. Silviculturally, this stand can be left to develop and recover this planning period. From a wildlife

habitat standpoint, there are opportunities to establish and maintain permanent openings with early successional habitat. Locating a permanent opening below Sam's Lookout will provide the added benefit of sustaining that view. This could be accomplished by a mechanical treatment (possibly a Brontosaurus (forestry mower/stump grinder) followed by periodic brush hogging about every 3 years. Treat invasives.

Recommended Management:

Year	Treatment	Priority
2020	Consider Brontosaurus treatment to establish permanent early successional habitat below Sam's Lookout.	High
ASAP	Treat invasives.	High

Stand Number: UM2

Stand Type: Hemlock-white ash-red maple-sugar maple-beech 3 B

Stand Acres: 142.7

Soils: Largely IB (best for oak and white birch) with a small patch of IA (best for high quality hardwoods) at the northern tip of the stand.

Site: Shallow soils, generally well drained, with moderate to very steep slopes. Some small areas of enrichment on mid-slope.

Forest Composition: Overstory small sawtimber size, and generally more uniform than Stand 1, dominated by a mix of hemlock, white ash, red maple, sugar maple and beech.

Regeneration: More scattered than Stand 1, dominated by a mix of beech and red spruce.

Natural Communities: Hemlock-Red Spruce-Northern Hardwood

Forest Health: Understory spruce showing decline. Beech bark disease common.

Stocking: Basal area averages around 100 to 120. Stocking is more uniform here than in Stand 1 and is adequately to just under-stocked for a mixed stand.

Timber Quality: Residual stocking is generally poor to average quality. Yellow birch poles show future potential.

Wildlife Habitat: Mixed, remote, interior forest. Some large trees providing important cavity, shelter, and legacy habitat.

Water and Wetland Features: One 1st order stream that drains to the north into Quabbinight Brook and eventually into the Sugar River.

Invasives: Scattered buckthorn throughout.

Past Management: Stand has been entered multiple times, including some selection harvesting in the 1990s, then portions were harvested during the 2008-2011 harvest that occurred in Stand 1. Cutting was not as intensive here, but still resulted in a largely high-graded stand condition.

Other:

- Woods trails and skids, especially on the northwest slope of Unity Mountain were poorly laid out, going straight up and down the slope resulting in intense rutting and soil erosion. The trails were not closed out.
- Snowmobile trail crosses stand, with installed and gated bridge. Maintained by Crescent Lake Snoriders snowmobile club.

Management Objectives: This stand should be managed for a combination of timber and wildlife habitat. Ideally the skid trails would be properly closed out, but that likely isn't practical at this point in

time. This stand needs to be left to recover for at least this planning period. In future treatment, consider leaving enriched areas to develop naturally. Treat invasives.

Recommended Management:

Year	Treatment	Priority
--	Leave to grow.	--
ASAP	Treat invasives.	Medium

Stand Number: UM3

Stand Type: Hemlock-yellow birch-red maple-red oak 3/4 B

Stand Acres: 68.9 (3 non-contiguous areas)

Soils: Combination of IIA (shallow and rocky) and IB (best for oak and white birch).

Site: Shallow soils, generally well drained, with moderate to very steep slopes.

Forest Composition: Overstory small to large sawtimber size, mix of hemlock and hardwoods with better stocking than surrounding areas.

Regeneration: Scattered, dominated by a mix of beech and hemlock.

Natural Communities: Hemlock-Red Spruce-Northern Hardwood

Forest Health: Understory spruce showing decline.

Stocking: Basal area averages around 180. Higher stocking than surrounding areas, and overstocked for stand type.

Timber Quality: Timber quality is generally poor to average.

Wildlife Habitat: Hemlock dominated, remote, interior forest with sparse, open understory.

Water and Wetland Features: None.

Invasives: None noted.

Past Management: Stand saw some light harvesting in the 1990s, but was worked around in more recent harvesting.

Management Objectives: This stand should be managed for a combination of timber and wildlife habitat. For the time being, it provides diversity in habitat, with more dense stocking than surrounding forest. It should be left to develop naturally for this planning period.

Recommended Management:

Year	Treatment	Priority
--	Leave to grow.	--

Stand Number: UM4

Stand Type: Red spruce-hemlock-yellow birch-red maple 3 AB

Stand Acres: 62.2

Soils: Primarily IIA (shallow and rocky) with some IA (best for high quality hardwoods) on side slope.

Site: Shallow soils, with perched wetlands with sphagnum moss on height, tending towards lowland spruce fir site. Better soils on mid slope, eastern aspect.

Forest Composition: Overstory a mix dominated by small sawtimber size red spruce with some hemlock, red maple and yellow birch. Fair amount of blow down here due to high elevation and shallow, wet soils.

Regeneration: Primarily a mix of red spruce, hemlock and some red maple and beech, scattered.

Natural Communities: Lowland Spruce-Fir

Forest Health: Understory spruce showing decline. Beech bark disease common.

Stocking: Basal area averages around 160 (fully stocked), but is patchy due to blowdown.

Timber Quality: Generally poor. Spruce somewhat low vigor and branchy. Remainder, typical for site.

Wildlife Habitat: Spruce-fir site add diversity. Perched wetlands provide important habitat, especially in spring. Remote, softwood dominated forest. Scattered hobblebush. Some areas of fern and moss associated with the wetlands.

Water and Wetland Features: Not delineated, but stand includes small perched wetlands.

Invasives: None noted, but likely scattered buckthorn.

Past Management: Stand was not entered during recent harvest, but saw selection cutting during 1990s.

Management Objectives: This stand should be left to develop quality spruce lowland wildlife habitat. Wildlife potential far outweighs value for timber. For the time being, leave to develop naturally.

Recommended Management:

Year	Treatment	Priority
--	Leave to grow.	--