

PROPERTY DESCRIPTION

Due to its remoteness from main roads, this property has seen no farming activity except for a small section on the northeast corner. All stands on the property either went through a partial cut or a clear cut and as a result many of the stands are experiencing abundant balsam fir regeneration. Throughout the property, the land is well-drained and can certainly produce high-quality trees. There are many sizable, high-value trees all through this property, including American beech, yellow birch, white birch, red maple, sugar maple, eastern hemlock and red spruce. Much of the mature balsam fir on the property is either dead or dying. There also is a lack of shrubs throughout the property and a low diversity of wildflowers and ferns. The property has an overgrown forest road running almost its entire length in an east-west direction, which will provide good accessibility once it is cleaned up. Many seedlings of useful tree species - eastern hemlock, sugar maple, American beech and yellow birch - are growing on and alongside the track and some of these will be used as transplants to enhance the woodland.

Special notes:

Many species of birds were seen and heard on the property, including a barred owl. Signs of red squirrel, snowshoe hare, and coyote were identified during the survey. This strongly indicates that this property supports good wildlife activity.

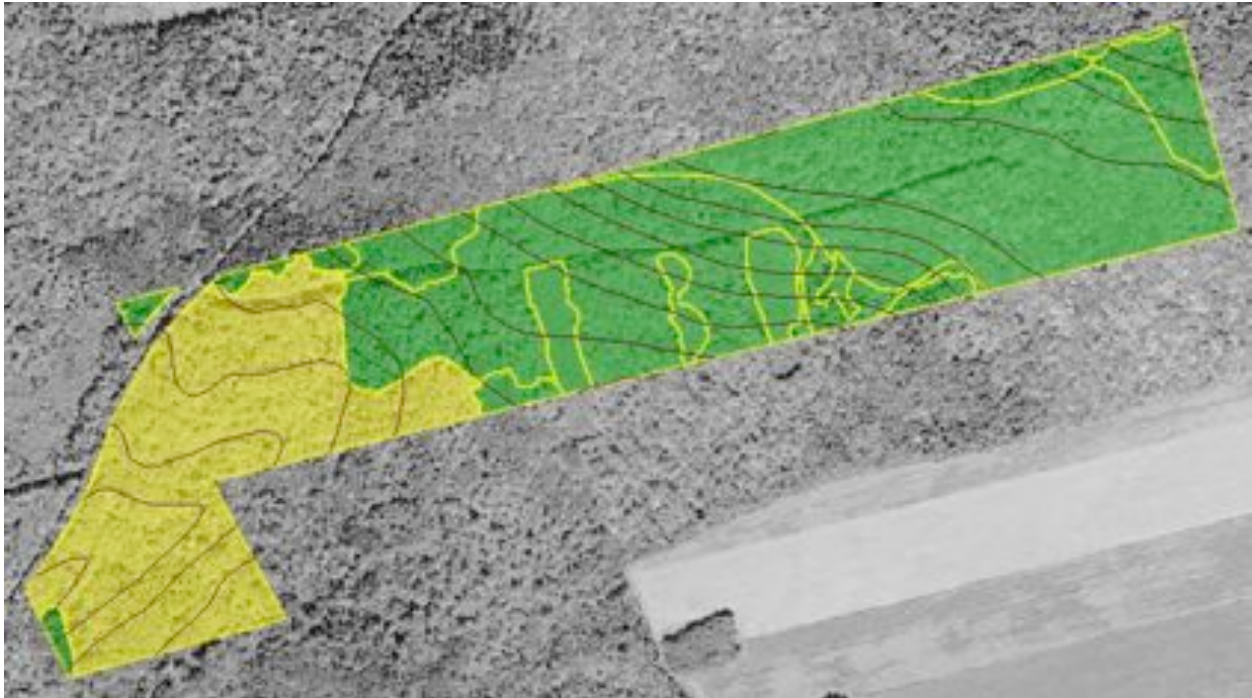
Along the forest road were small older garbage piles beside the bullpens.

This property will be able to produce a great deal of high-quality fuelwood and hardwood lumber, just from the removal of some of the diseased American beech that can be found throughout the forest. Generally, a sustainable harvest level is approximately ½ cord per acre (4.5 cubic meters per hectare) annually from most Island forests. Sustainable harvesting practices will actually improve the quality of trees within the woodland by the strategic extraction of trees, such as the removal of a cankered American beech overshadowing a young yellow birch. At the same time, it is critical to ensure that there are still adequate wildlife trees throughout the property. In all stands, improving forest health and future woodland value through proper pruning and enhancement plantings makes good sense. The income generated from the sale of wood products will help fund some of the other silviculture practices we will be carrying out on the property that will have no financial returns for many years.

Improving the quantity and quality of the woodlands will help reverse some of the past practices that have led to degraded ecosystems. The mainstays of the plantings will be high-value trees such as yellow birch, sugar maple, white ash, red oak, white pine and red spruce that grow so well in this climate. Rare native species such as ironwood, witch hazel, hobblebush and yellow violet will also be added to increase biodiversity.

STAND TREATMENTS

Stand #1 (7.72 ha):



The largest stand on the property directly facing off the Jack's Road. This stand has never been ploughed and has a topography that is slightly sloping to the east.

The stand is predominately occupied by yellow and white birch with an overall increase in American beech when walking towards the west of the stand.

Several large eastern hemlock are located in the vicinity of the road. There are also two large white spruce towards the southern end of the stand. Two undiseased American beech in the stand are especially interesting as potential seed sources for future nursery stock, and as wildlife trees for both food and habitat. These two trees have diameters of 57.7cm and 46cm.

Except for the ground hemlock found in several sections of the stand, no shrubs are present.

An unusual 0.08 ha section of the stand is composed of overstocked immature trees dominated by 12m balsam fir. This growth has created a dark shade understory that has little plant regeneration. The area is located in the southwest corner next to Stand #11.

Drainage: high **Watercourse:** no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

| | | | | |
|--------------------|--------------|---------|------------------|-----------|
| #1: yellow birch | 40% of stand | age: 60 | Diameter: 22.5cm | Ht: 16.5m |
| #2: white birch | 20% of stand | age: 60 | Diameter: 23.5cm | Ht: 18.0m |
| #3: red maple | 20% of stand | age: 60 | Diameter: 21.2cm | Ht: 15.5m |
| #4: American beech | 10% of stand | age: 60 | Diameter: 28cm | Ht: 15.4m |

Tree source: stump sprout: 10% seed: 90% plantation: 0%

Maturity class: mature

Canopy description: tall closed with some side light

Stocking: fully stocked

Tree quality: low

Regeneration <5m: medium #1: balsam fir Ht: 1m #2: American beech Ht: 0.1m #3: yellow birch Ht: 0.1m #4: eastern hemlock Ht: 0.1m #5: striped maple Ht: 0.1m

Other plant species: white spruce, red spruce, ground hemlock, bunchberry, clintonia, sarsaparilla, starflower, common lady's slipper, pyrola (spp), veronica, wood fern, ground pine, bristly clubmoss, Indian pipe

Total % ground cover: 30% moss 5% shrub 20% flower 20% tree

Coarse woody debris: medium # **Snag trees:** medium **Quality of snags:** low

Wildlife: red squirrel, hermit thrush, ovenbird, black-capped chickadee, American robin, blue jay

Treatment: Girdle 5-10 of the larger beech to provide snags. Introduce 100 shade tolerant shrubs, including witch hazel, hobblebush, alternate leaf dogwood, and beaked hazelnut, throughout the stand.

Release eastern hemlock, red spruce, red maple and yellow birch.

Take out some of the less valuable large American beech for fuel and to add light for tree regeneration or tree plantings.

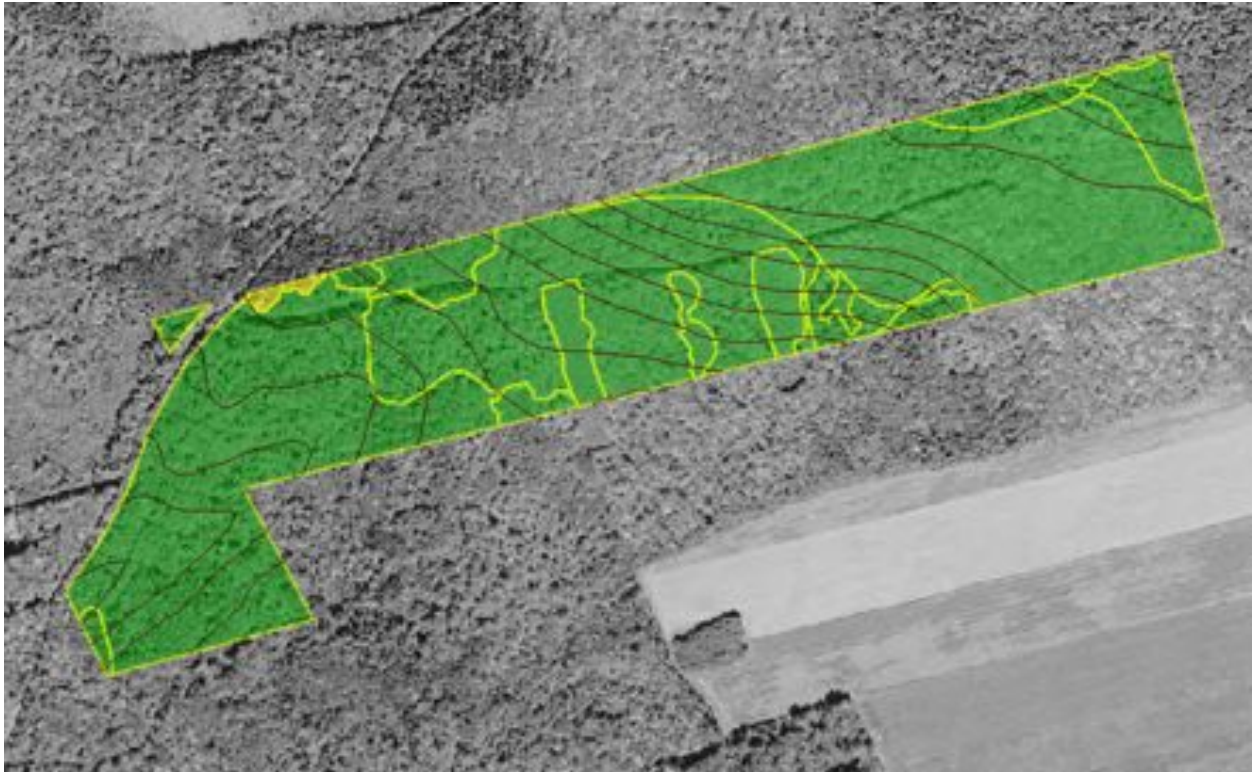
Create approximately 30 small patch cuts evenly distributed throughout the stand. The many small areas of dense balsam fir (3-8m tall) can be cut to create these patches. The removal of some large American beech for fuel wood will also create suitable openings.

In the openings, plant sugar maple, white pine, eastern hemlock (transplanted from the road), witch hazel, beaked hazelnut, alternate leaf dogwood, hairy sweet cicely, yellow violets, jack-in-the-pulpit, royal fern and interrupted fern.

Ground hemlock can be harvested from the site with strict adherence to provincial guidelines if the market for the product is strong.

The balsam fir area should receive the following treatment: thinning, releasing, and pruning of yellow birch and red maple trees. Remove all balsam firs except the very best ones to open up the area and then plant white pine, eastern hemlock, sugar maple and shade tolerant shrubs.

Stand #2 (0.1 ha):



This stand is located on the northern side of the main entrance in the northwest corner of property. The topography is flat. It is a coniferous stand, dominated by red spruce, with six large eastern hemlocks. The eastern hemlocks are clumped at the entrance of the stand and are the source of the eastern hemlock regeneration along the first 40m of the woods road. These woods are very dark, with many small dead balsam fir and little growth on the forest floor.

Drainage: high **Watercourse:** no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

#1: red spruce 55% of stand age: 80 Diameter: 20cm Ht: 15m

#2: balsam fir 35% of stand age: 60-80 Diameter: 11.8cm Ht: 13m

#3: eastern hemlock 10% of stand age: 150 Diameter: 36.8cm Ht: 17m

Tree source: stump sprout: 0% seed: 100% plantation: 0%

Maturity class: mature

Canopy description: tall closed

Stocking: fully stocked

Tree quality: medium

Regeneration <5m: low #1: balsam fir Ht: 0.05m #2: red spruce Ht: 0.05m #3: American beech Ht: 0.05m

Other plant species: white birch, yellow birch, red maple, starflower, bracken fern, wild lily-of-the-valley, Indian pipe

Total % ground cover: 50% moss 0% shrub 0% flower 10% tree

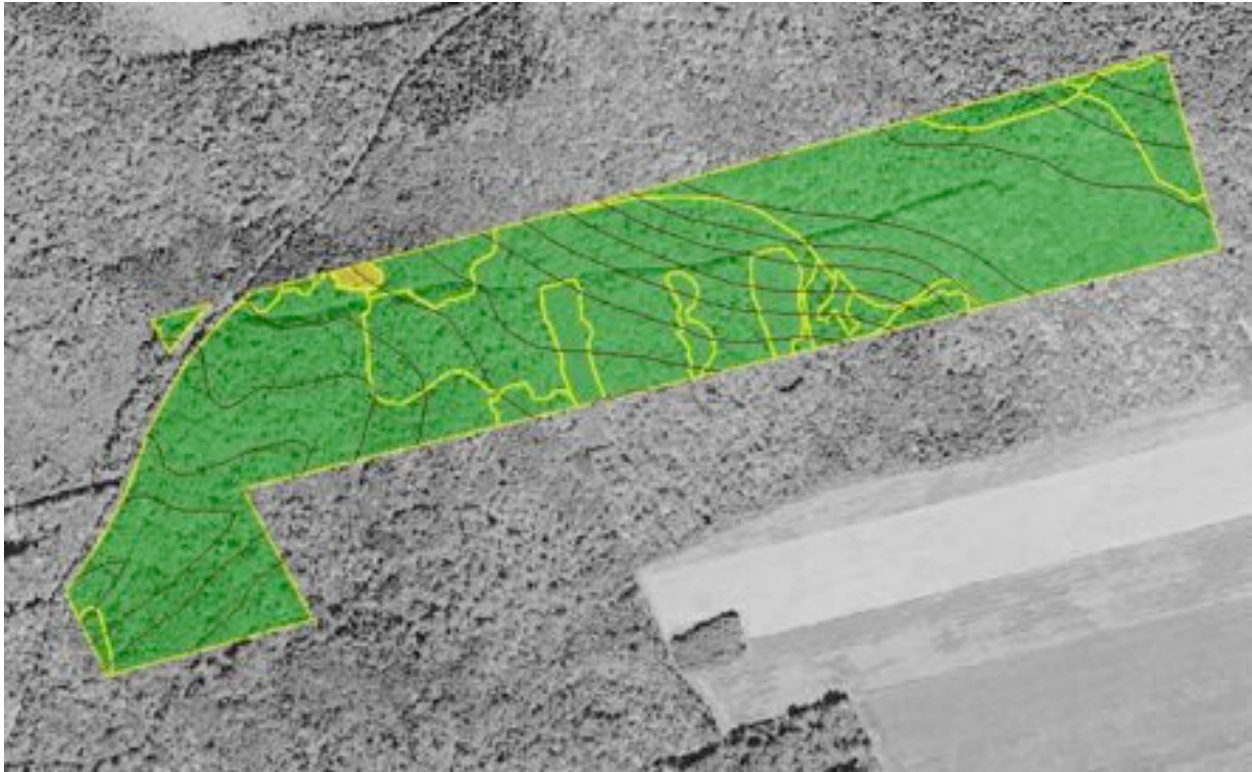
Coarse woody debris: medium # **Snag trees:** medium **Quality of snags:** low

Wildlife: black-capped chickadee, ovenbird, red squirrel

Treatment: Create one or two patch cuts approximately 15m in diameter in the worst sections of the stand. This will be done to remove the poorest quality, less valuable wood from the stand; to reintroduce a mix of native species appropriate to the stand, and to increase the health and value of the stand. Plant the patches with a mix of sugar maple, white pine and yellow birch (transplanted from the road), as well as witch hazel, alternate leaf dogwood and round leaf dogwood.

Some fuelwood may be removed in these cuts.

Stand #3 (0.11 ha):



This stand is located to the east of Stand #2 and is gently sloping to the north. There is very little canopy cover in this stand as the majority of the stand is standing dead balsam fir. There are a few live trees but all live remaining balsam fir will probably die over the next decade.

Drainage: high

Watercourse: no

Ploughed: no

Origin: clear cut

Dominant and codominant trees:

| | | | | |
|--------------------|--------------|----------|------------------|-----------|
| #1: white birch | 20% of stand | age: 40+ | Diameter: 12.5cm | Ht: 15m |
| #2: American beech | 20% of stand | age: 40+ | Diameter: 12.9cm | Ht: 15.5m |
| #3: balsam fir | 20% of stand | age: 40+ | Diameter: 13cm | Ht: 12.3m |
| #4: yellow birch | 20% of stand | age: 40+ | Diameter: 10.9cm | Ht: 12m |
| #5: red spruce | 10% of stand | age: 40+ | | |

Tree source: stump sprout: 0% seed: 100% plantation: 0%

Maturity class: mature

Canopy description: tall open

Stocking: understocked

Tree quality: low

Regeneration <5m: medium #1: balsam fir Ht: 0.15m #2: red maple Ht: 0.2m #3: yellow birch Ht: 0.1m #4: American beech Ht: 0.1m

Other plant species: white birch, grey birch, red maple, red spruce, pin cherry, raspberry, starflower, common lady slipper, wood fern, old man's beard, Indian pipe

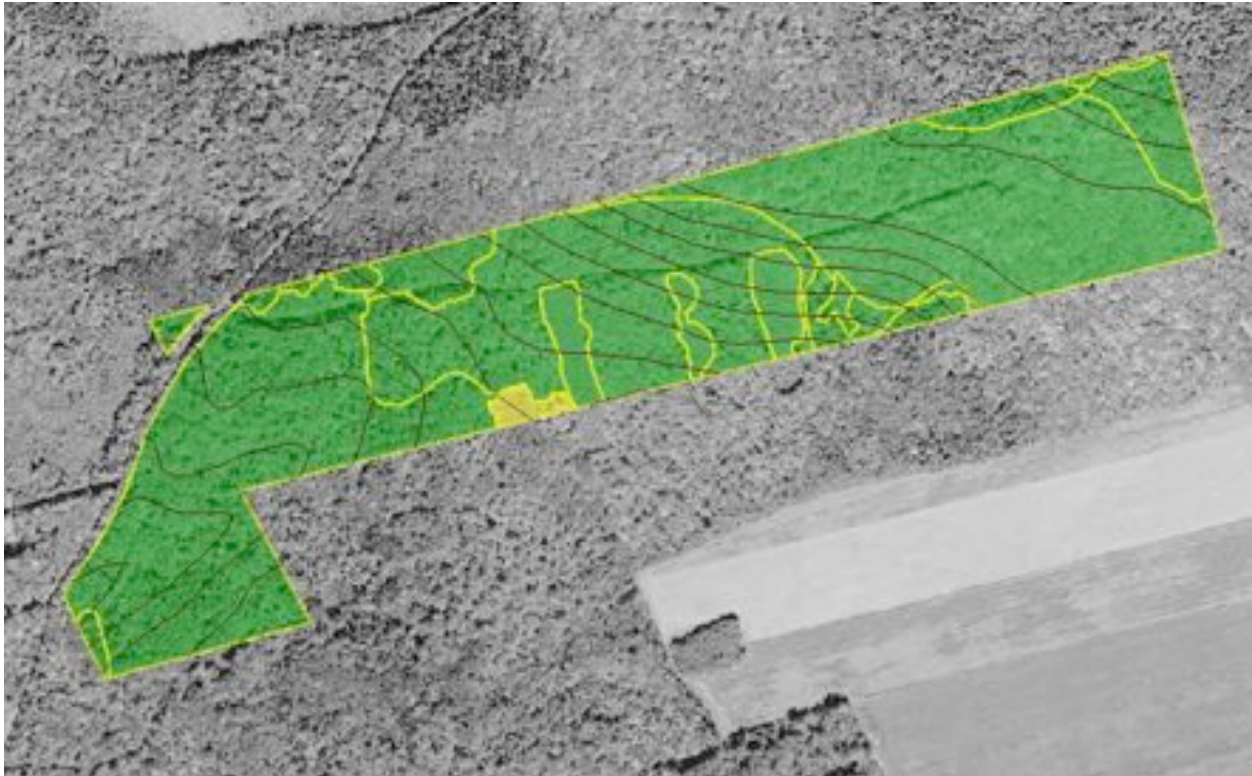
Total % ground cover: 30% moss 0% shrub 20% flower 40% tree

Coarse woody debris: medium # **Snag trees:** high **Quality of snags:** low

Wildlife:

Treatment: Create patches throughout the stand by cutting down most of the dead fir, leaving any that are suitable for stable snag trees. This would be a good place to try some direct planting red oak and white ash, and - after scarifying the soil - of seeding yellow birch. Transplant sugar maple, eastern hemlock and white pine from the roadway, and add witch hazel and highbush cranberry.

Stand #4 (0.22 ha):



Located in the middle section of the property, this stand has a flat topography. It is definitely overstocked with balsam fir, the dominant species, and there is also a lot of yellow birch. No other tree species were seen in the stand. The forest floor is very dark, preventing regeneration from taking place.

Drainage: high

Watercourse: no

Ploughed: no

Origin: clear cut

Dominant and codominant trees:

#1: balsam fir 70% of stand age: 30-40 Diameter: 11.5cm Ht: 12m

#2: yellow birch 30% of stand age: 30-40 Diameter: 6.6cm Ht: 12m

Tree source: stump sprout: 10% seed: 90% plantation: 0%

Maturity class: immature

Canopy description: tall closed

Stocking: overstocked

Tree quality: medium low

Regeneration <5m: very low #1: balsam fir Ht: 0.5m

Other plant species: Indian pipe, wood fern

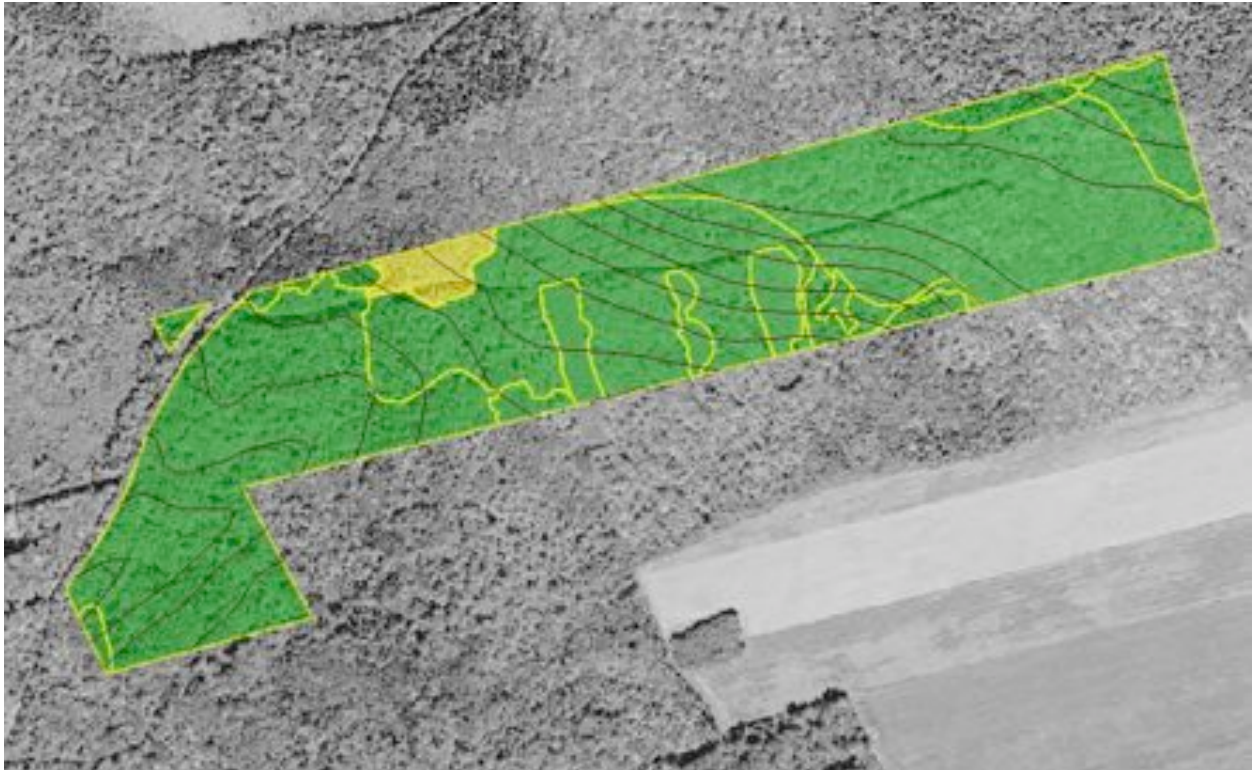
Total % ground cover: 1% moss 0% shrub 0% flower 2% tree 97% leaf litter

Coarse woody debris: no # **Snag trees:** no **Quality of snags:** low

Wildlife: many black-capped chickadees

Treatment: Release and prune as necessary all yellow birch and any other high-value trees of good quality. Removal of trees should focus on deformed or dying trees. A minimum of two patch cuts 12m in diameter are needed to get a head start on increasing species diversity. Red maple, sugar maple, striped maple, eastern hemlock, witch hazel, hobblebush, alternate leaf dogwood and beaked hazelnut are all species that should be planted in those patch cuts. More patch cuts should be done over the next 20 years to slowly replace the balsam fir.

Stand #5 (0.58 ha):



This flat area on the northern boundary line has the highest tree quality on this property. There is very little light that reaches the forest floor. The stand houses many large American beech and yellow birch that are excellent for wildlife and provide good sources for seed.

Drainage: high **Watercourse:** no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

#1: yellow birch 45% of stand age: 60 Diameter: 14cm Ht: 15m

#2: American beech 40% of stand age: 60 Diameter: 26cm Ht: 15m

#3: white birch 10% of stand age: 60 Diameter: 15cm Ht: 16m

#4: red maple 5% of stand age: 60 Diameter: cm Ht: m

Tree source: stump sprout: 50% seed: 50% plantation: 0%

Maturity class: mature

Canopy description: tall closed

Stocking: fully stocked

Tree quality: high

Regeneration <5m: medium #1: balsam fir Ht: 1m #2: American beech Ht: 0.1m

#3: yellow birch Ht: 0.1m

Other plant species: raspberry, starflower, wood fern, ground pine, lung lichen, Indian pipe

Total % ground cover: 10% moss 0% shrub 10% flower 10% tree

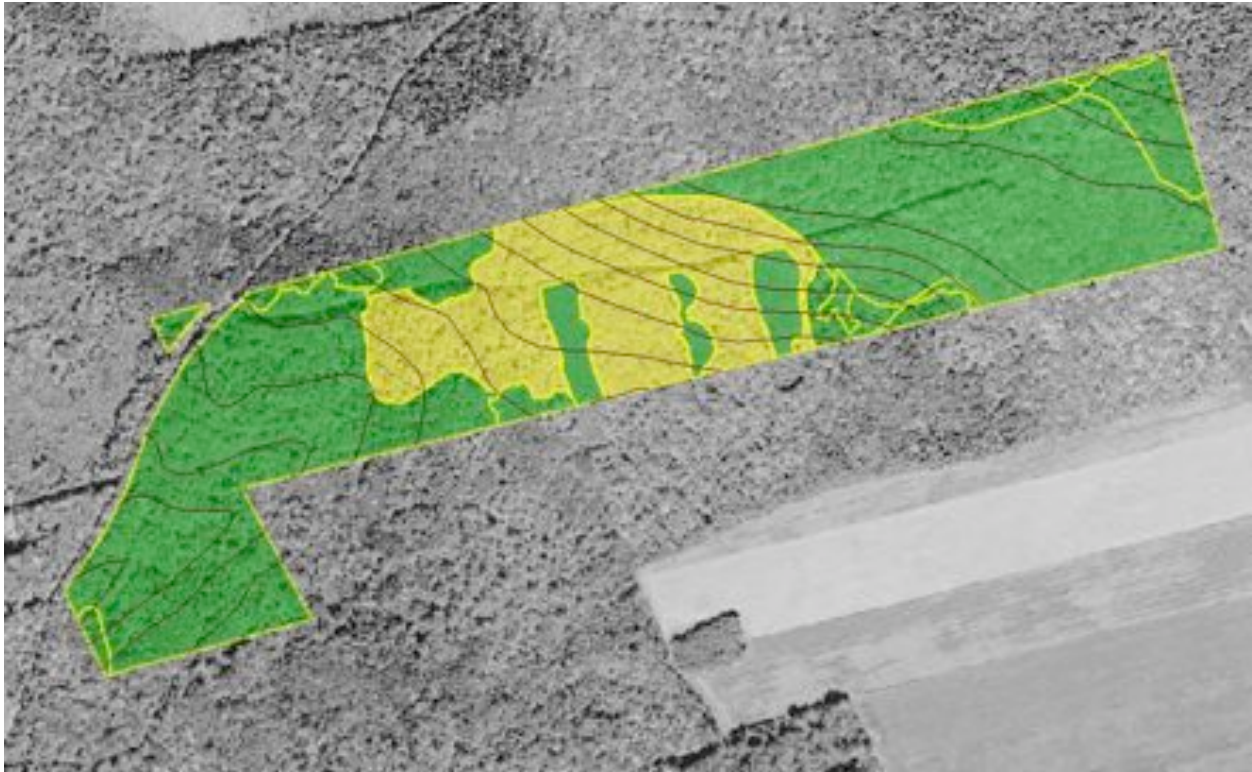
Coarse woody debris: low # **Snag trees:** high **Quality of snags:** medium

Wildlife: red squirrel, hermit thrush, two ovenbirds, black-capped chickadee, red eye vireo, male and female blue headed vireo, blue jay and one barred owl in a tree.

Treatment: Some wood can be removed for fuel or product uses. This will at the same time create openings in the tree canopy creating patch cuts that can be used to plant sugar maple, striped maple, ironwood, and shade tolerant shrubs to add diversity in the stand. Three or four 10m diameter patch cuts will have a positive impact.

Pruning and releasing red maple, yellow birch, and American beech should be carried out throughout the stand to increase the stand's overall value.

Stand #6 (5.95 ha):



A very patchy stand of large American beech with codominant yellow birch. The general topography gently slopes to the south. The understory of the stand has very dense regeneration of 2-8m tall balsam fir growing throughout the stand, suppressing many of the other potentially-regenerating tree species. This is a result of extensive wood removal that was done several years ago, essentially leaving the American beech trees. The northern section of the stand has straight American beech, with one being 37cm diameter. Another American beech situated in the middle of the stand is 55cm in diameter.

On the western border of the stand (along the edge of Stand#15), there is a small area with American beech where the dead or dying balsam fir have created openings in the canopy.

Drainage: high **Watercourse:** no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

#1: American beech 80% of stand age: 80 Diameter: 30.3cm Ht: 17.5m

#2: yellow birch 20% of stand age: 80 Diameter: 17.6cm Ht: 15.7m

Tree source: stump sprout: 10-15% seed: 85-90% plantation: 0%

Maturity class: mature

Canopy description: tall, patchy with lots of side light.

Stocking: understocked

Tree quality: low

Regeneration <5m: high #1: balsam fir Ht: 1m #2: yellow birch Ht: 0.1m #3: American beech Ht: 0.1m

Other plant species: white birch, red maple, white spruce, red spruce, ground hemlock, bunchberry, clintonia, sarsaparilla, starflower, common lady's slipper, pyrola (spp), veronica, wood fern, ground pine, bristly clubmoss, Indian pipe

Total % ground cover: 30% moss 5% shrub 20% flower 20% tree

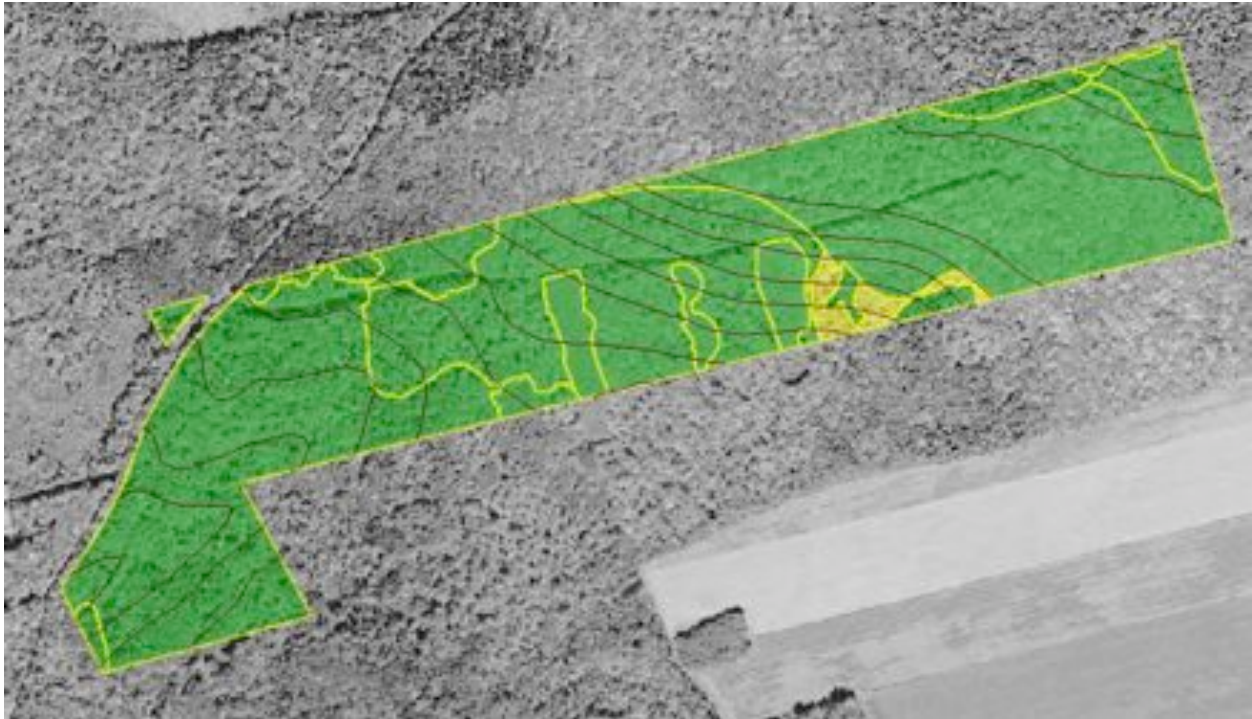
Coarse woody debris: low # **Snag trees:** low **Quality of snags:** medium

Wildlife: junco, snowshoe hare scat

Treatment: The amount of balsam fir regeneration needs to be significantly lowered, either through pulling or cutting.

Release yellow birch, red maple and American beech to increase the future health and value of the stand. Cut some of the less healthy American beech for fuel and replant with white pine, sugar maple, red spruce, eastern hemlock, ironwood and shade tolerant shrubs species.

The small area bordering on the western edge of Stand #15 has cankered and deformed American beech that will make excellent fuelwood, as well as some hardwood lumber. These trees can be removed through selective harvesting or in patch cuts, depending on the density of the poor quality trees.

Stand #7 (0.44 ha):

This stand runs along the southern boundary of the property and slopes to the southwest. There are many large white spruce throughout the stand and above-average sized specimens of a variety of other tree species present. The stand is multilayered and has dappled light reaching the understory and forest floor.

Drainage: high **Watercourse:** no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

| | | | | |
|--------------------|--------------|-------------|----------------|------------|
| #1: American beech | 35% of stand | age: 60 | Diameter: 23cm | Ht: 16.5 m |
| #2: yellow birch | 25% of stand | age: 40 | Diameter: 17cm | Ht: 15.5m |
| #3: white spruce | 15% of stand | age: 80-100 | Diameter: 40cm | Ht: 23.5 m |
| #4: white birch | 15% of stand | age: 40 | Diameter: 15cm | Ht: 17m |
| #5: red maple | 10% of stand | age: 40 | Diameter: 16cm | Ht: 16m |

Tree source: stump sprout: 10% seed: 90% plantation: 0%

Maturity class: mature

Canopy description: tall and patchy

Stocking: fully stocked

Tree quality: medium

Regeneration <5m: very high #1: balsam fir Ht: 1m #2: red spruce Ht: 0.5m #3: red maple Ht: 0.15m #4: white birch Ht: 0.1m #5: American beech Ht: 0.1m #6: sugar maple Ht: 0.1m

Other plant species: common lady's slipper, sarsaparilla, starflower, bracken fern,

Total % ground cover: 5% moss 0% shrub 0% flower 70% tree

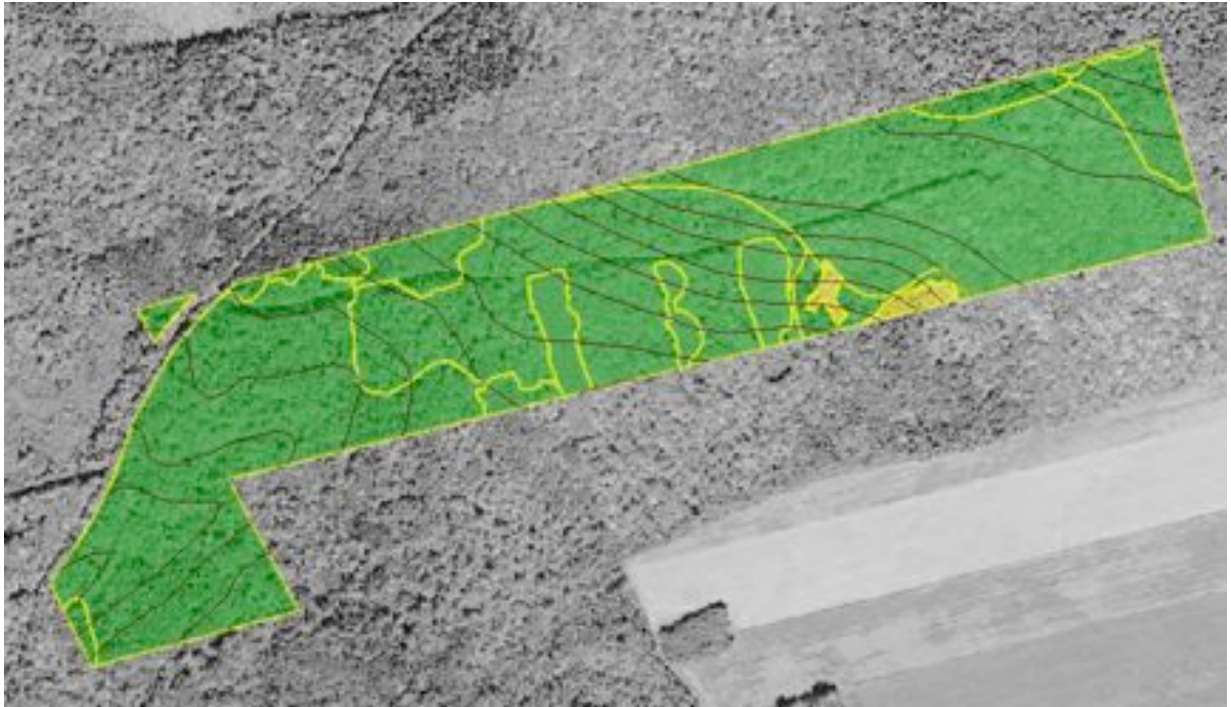
Coarse woody debris: low **# Snag trees:** low **Quality of snags:** medium

Wildlife:

Treatment: Plant 25 shade tolerant shrubs throughout the stand, such as witch hazel, hobblebush, alternate leaf dogwood, beaked hazelnut and round leaf dogwood.

Release and prune potential crop trees of sugar maple, yellow birch, red maple and white birch.

Stand #8 (0.29 ha):



Red spruce is the dominant species in this small stand. Like many other forests dominated by conifers, the understory is quite dark. This stand is split into two separate sections. Most of the tree stems are of good quality. There are several large white spruce in both sections. There are also some mature white pines near the edge of the property, the only ones that were found.

Drainage: high

Watercourse: no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

#1: red spruce 60% of stand age: 40 Diameter: 16.9cm Ht: 14.5m

#2: white birch 10% of stand age: 40 Diameter: 20cm Ht: 17m

#3: yellow birch 10% of stand age: 40 Diameter: 12.8cm Ht: 15m

#4: balsam fir, American beech, red maple 20% of stand

Tree source: stump sprout: 10% seed: 90% plantation: 0%

Maturity class: mature

Canopy description: tall closed

Stocking: fully stocked

Tree quality: high

Regeneration <5m: some #1: balsam fir Ht: 0.1m #2: red maple Ht: 0.15m #3: red spruce Ht: 0.1m #4: white birch Ht: 0.15m eastern white pine Ht: 0.1m

Other plant species: white spruce, eastern white pine, starflower, common lady's slipper, wood fern, bracken fern, Indian pipe

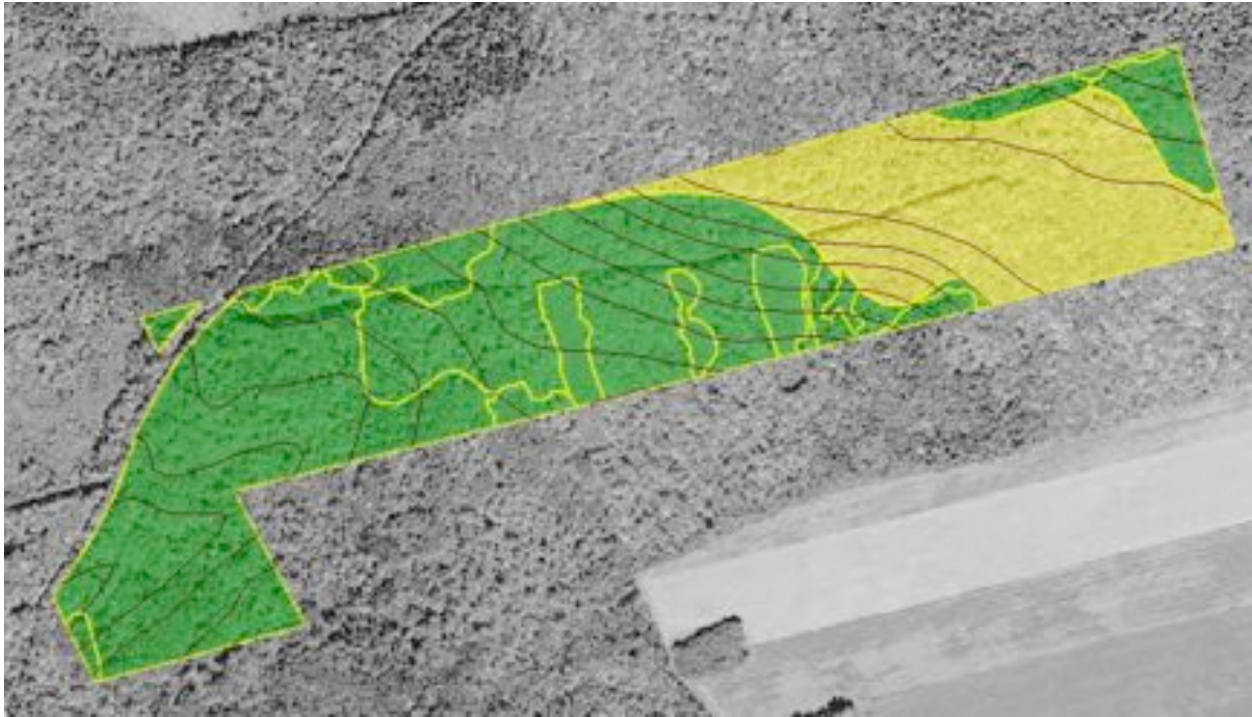
Total % ground cover: 20% moss 0% shrub 0% flower 10% tree

Coarse woody debris: low **# Snag trees:** low **Quality of snags:** low
Wildlife: red squirrel, hairy woodpecker

Treatment: Prune and release potential yellow birch, red maple and red spruce crop trees and thin some of the red spruce to reduce competition.

Plant 15-20 shade tolerant shrubs and wildflowers, including witch hazel, hobblebush, alternate leaf dogwood, yellow violet, jack in the pulpit and hairy sweet cicely.

Plant 5-10 white pines to help its reestablishment in the stand.

Stand #9 (7.21 ha):

This is the second largest stand on the property, with relatively flat topography. The understory received a lot of reflected light, leading to a good plant community on the forest floor. The stand has by the most diversity of any within the property.

Drainage: high **Watercourse:** no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

| | | | | |
|--------------------|--------------|------------|------------------|-----------|
| #1: American beech | 50% of stand | age: 60-80 | Diameter: 30.7cm | Ht: 13.5m |
| #2: sugar maple | 15% of stand | age: 60-80 | Diameter: 15.4cm | Ht: 14m |
| #3: yellow birch | 15% of stand | age: 60-80 | Diameter: 18.3cm | Ht: 15.8m |
| #4: red maple | 15% of stand | age: 60-80 | Diameter: 15.1cm | Ht: 14m |
| #5: white birch | 5% of stand | age: 60-80 | Diameter: 21.5cm | Ht: 16.5m |

Tree source: stump sprout: 10% seed: 90% plantation: 0%

Maturity class: mature

Canopy description: tall closed patchy with side light

Stocking: fully stocked

Tree quality: medium

Regeneration <5m: medium #1:balsam fir Ht: 1m #2:red maple Ht: 0.1m #3: striped maple Ht: 0.1m #4: American beech Ht: 0.1m #5: red spruce Ht: 0.1m #6: yellow birch Ht: 0.1m

Other plant species: trembling aspen, red spruce, sugar maple, serviceberry, clintonia, blueberry, sarsaparilla, starflower, wild lily-of-the-valley, wood fern, bristly clubmoss, painted trillium, sedge (spp), beech fern, false solomon's seal, New York fern, pyrola (spp),

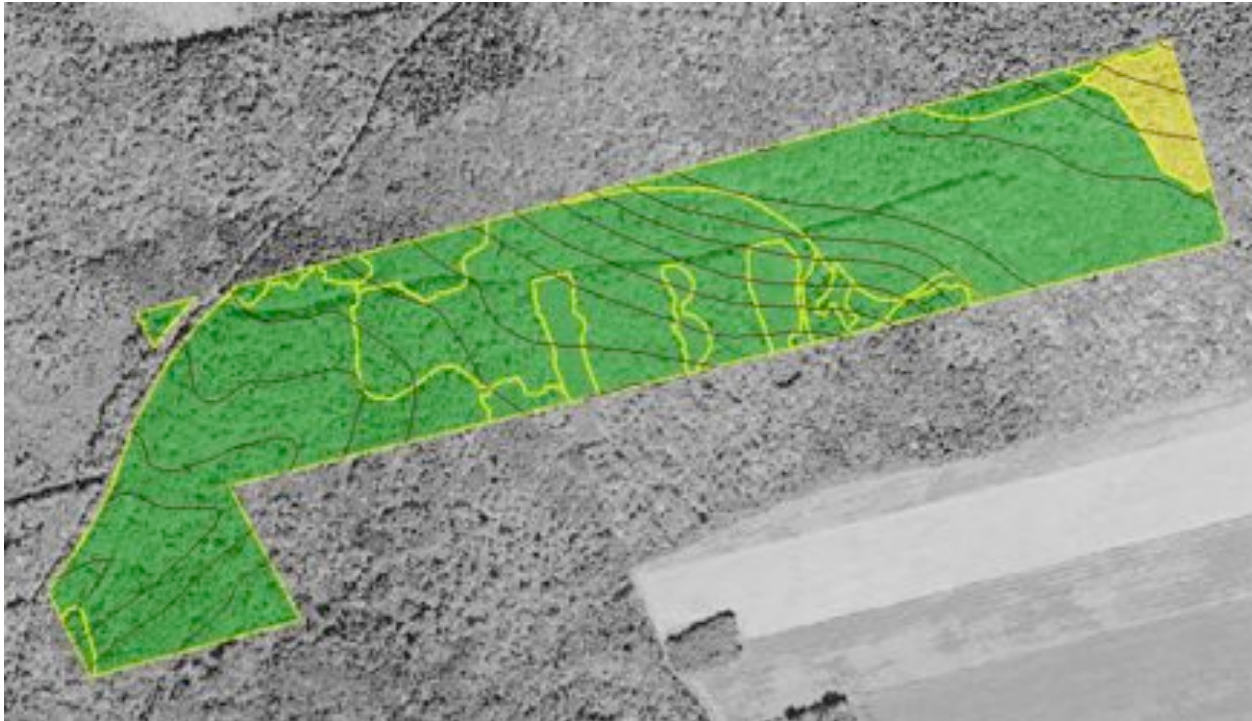
Total % ground cover: 0% moss 0% shrub 0% flower 40% tree

Coarse woody debris: low # **Snag trees:** low **Quality of snags:** medium

Wildlife: lots of snowshoe hare scat and browse signs, juvenile hairy woodpeckers, wood frog, black-throated green warbler, blue-headed vireo, blackburnian warbler, black and white warbler, and a hermit thrush nest with three eggs, discovered as the female flushed from the nest.

Treatment: Prune and release crop trees (yellow birch, white birch, red spruce and sugar maple) to improve tree health, quality and value. Remove some of the American beech for fuelwood, hardwood lumber and wood for turning large-diameter bowls. Plant 100 rare native plants throughout the stand, including ironwood, hobblebush, witch hazel, round leaf dogwood, yellow violets and hairy sweet cicely, as well as alternate leaf dogwood and beaked hazelnut.

Stand #10 (0.82 ha):



Located in the northeast corner of the property, the stand slowly slopes in that same direction. It is a mix of balsam fir and red maple with a lesser amount of yellow birch. Some of the balsam fir have died and this has opened up holes in the canopy. There is an increase in balsam fir as you go to the northern section of the stand, turning into a small balsam fir thicket.

Drainage: high

Watercourse: no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

#1: balsam fir 40% of stand age: 40-50 Diameter: 13.9cm Ht: 13m

#2: red maple 40% of stand age: 40-50 Diameter: 10.5cm Ht: 14m

#3: yellow birch 10% of stand age: 40-50 Diameter: 19.9cm Ht: 15m

#4: American beech, white birch 10% of stand age: 40-50

Tree source: stump sprout: 30% seed: 70% plantation: 0%

Maturity class: mature

Canopy description: tall closed with plenty of side light.

Stocking: fully stocked

Tree quality: low

Regeneration <5m: medium #1: balsam fir Ht: 0.15m #2: red maple Ht: 0.1m #3: striped maple Ht: 0.1m

Other plant species: wild raisin, ground hemlock, clintonia, sarsaparilla, starflower, wood fern, bracken fern, wild lily-of-the-valley, painted trillium, common lady's slipper, ground pine, running clubmoss, old man's beard, Indian pipe,

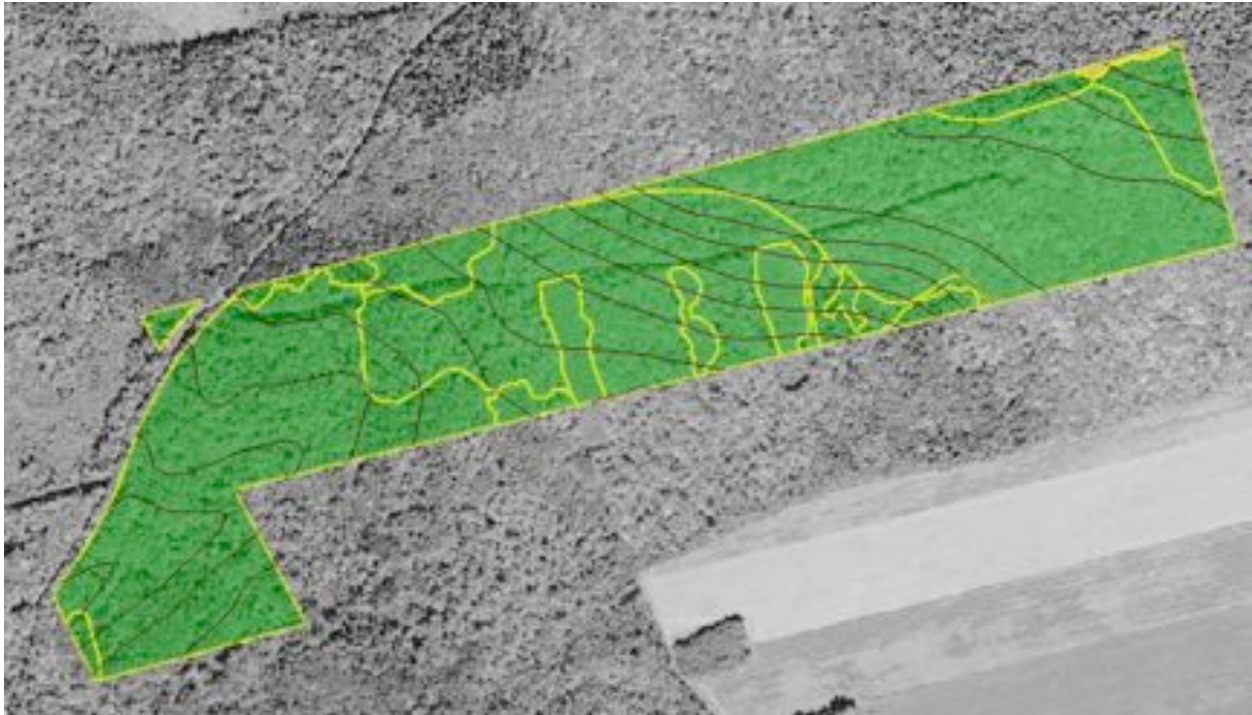
Total % Ground cover: 10% moss 10% shrub 20% flower 20% tree

Coarse woody debris: low # **Snag trees:** medium **Quality of snags:** low

Wildlife: ovenbird, red squirrel, hermit thrush, red eye vireo and blue jay

Treatment: Prune potential crop trees such as red maple, yellow birch and white birch, also releasing if necessary. Plant 20 shade tolerant shrubs throughout the stand. Make four patch cuts (including several in the balsam fir thicket) 10-12m in diameter and use these openings for planting red spruce, white pine, red oak, and white ash, as well as highbush cranberry, American mountain ash and serviceberry.

Stand #11 (0.78 ha):



This stand is along the northern boundary of the property, towards the east. It is unusual for this property in that it was once a ploughed field that has grown back into forest, extending into the neighbouring property. The topography is flat but gently slopes to the northeast. Most of the balsam fir are dead and as a result there are many snags throughout the stand.

Drainage: high **Watercourse:** no

Ploughed: yes

Origin: old field

Dominant and codominant trees:

#1: red spruce 40% of stand age: 40-50 Diameter: 15.5cm Ht: 14m

#2: red maple 30% of stand age: 40-50 Diameter: 13cm Ht: 14m

#3: balsam fir 20% of stand age: 40-50 Diameter: 17.5cm Ht: 13.5m

#4: yellow birch, white birch 10% of stand age: 40-50 Diameter: 14cm Ht: 14m

Tree source: stump sprout: 0% seed: 100% plantation: 0%

Maturity class: mature

Canopy description: tall and quite open

Stocking: understocked

Tree quality: low

Regeneration <5m: medium #1: balsam fir Ht: 0.1m #2: red maple Ht: 0.1m #3: striped maple Ht: 0.1m

Other plant species: starflower, bracken fern, wood fern, old man's beard, wild lily-of-the-valley, Indian pipe

Total % ground cover: 80% moss 0% shrub 5% flower 5% tree

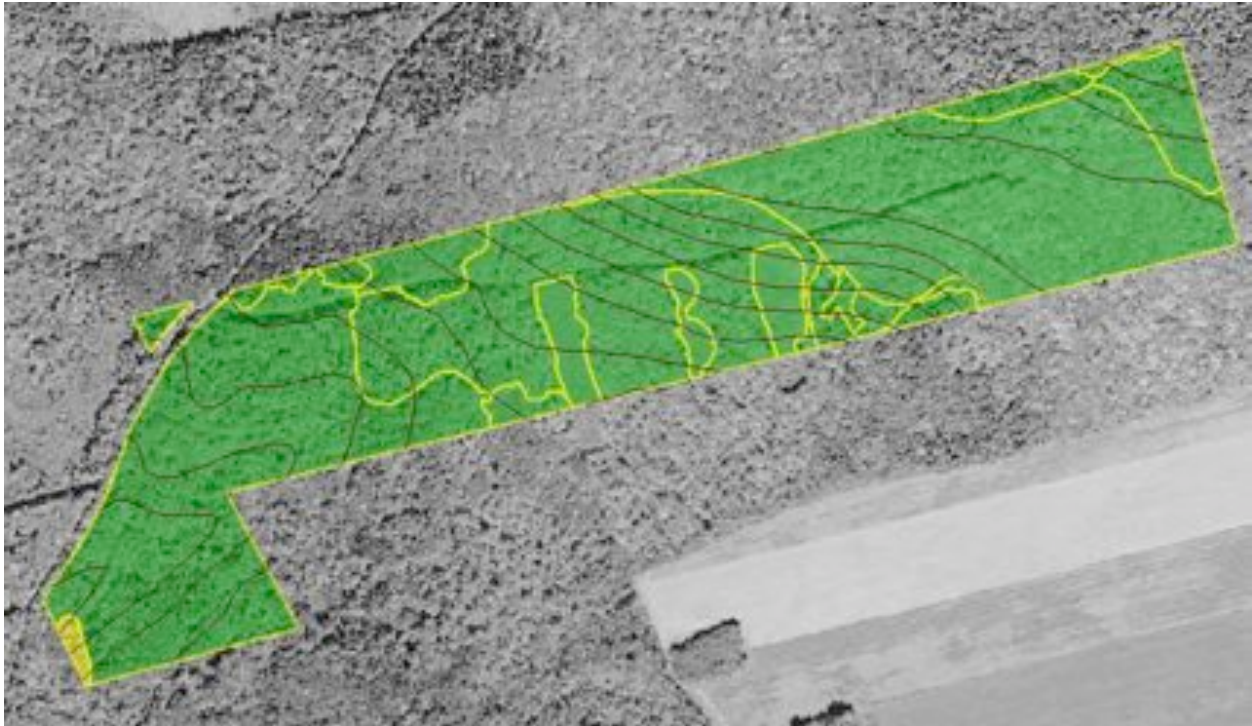
Coarse woody debris: medium high **# Snag trees:** high **Quality of snags:** low

Wildlife:

Treatment:

Prune potential crop trees such as red maple, yellow birch, white birch and release if necessary. Plant fruit-bearing shrubs, five each of highbush cranberry, American mountain ash, alternate leaf dogwood, serviceberry and round leaf dogwood. Make five patch cuts (12m in diameter) or enlarge natural openings to create places to plant sugar maple, red oak, yellow birch, eastern hemlock, red spruce and white pine.

Stand #12 (0.11 ha):



This stand is located in the southwest corner of the property and is occupied by quite straight yellow birch and white birch trees. Though small, it is quite different from the surrounding woodland. The topography slopes towards the north.

Drainage: high

Watercourse: no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

#1: yellow birch 50% of stand age: 60+ Diameter: 18cm Ht: 18m

#2: white birch 40% of stand age: 60+ Diameter: 17.1cm Ht: 19m

#3: red maple 10% of stand age: 60+ Diameter: 18.2cm Ht: 17m

Tree source: stump sprout: 10% seed: 90% plantation: 0%

Maturity class: mature

Canopy description: tall closed

Stocking: fully stocked

Tree quality: medium high

Regeneration <5m: medium #1: red maple Ht: 0.5m #2: balsam fir Ht: 0.5m #3: striped maple Ht: 0.1m

Other plant species: American beech, clintonia, starflower, wild lily-of-the-valley, false solomon's seal, painted trillium, wood fern, old man's beard, ground pine, indian pipe,

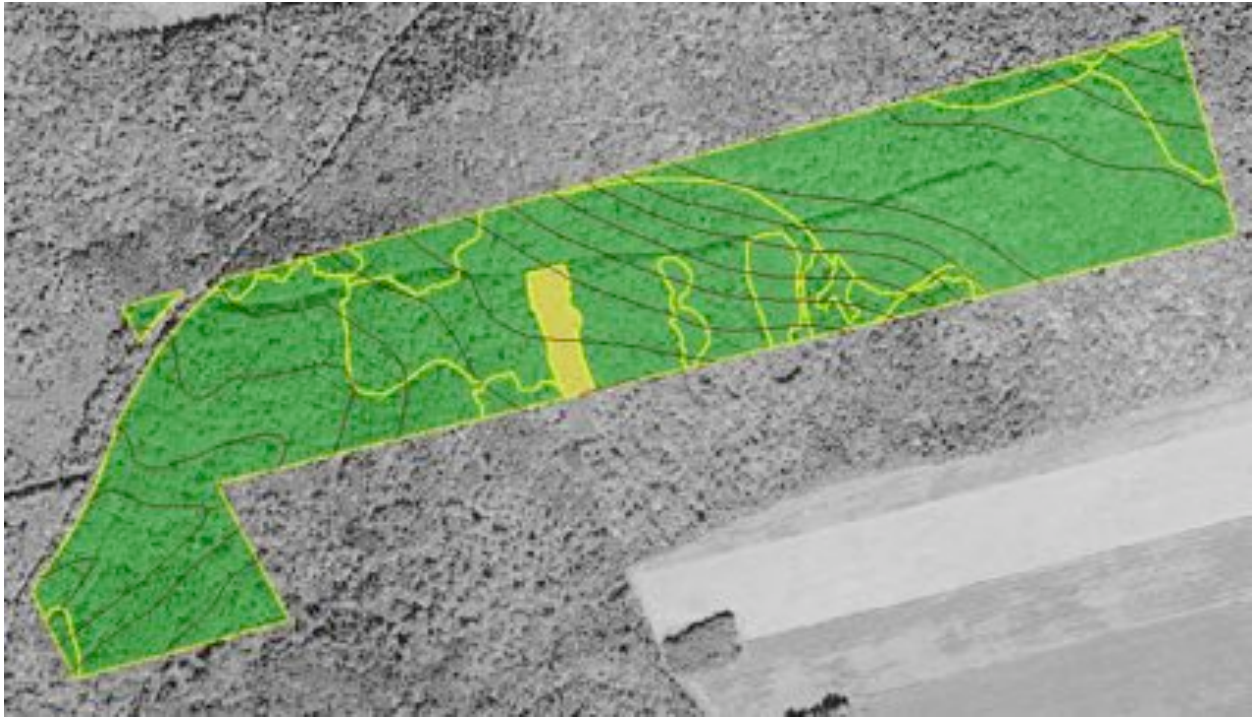
Total % ground cover: 5 moss 0% shrub 25% flower 30% tree

Coarse woody debris: medium # **Snag trees:** medium low **Quality of snags:** medium

Wildlife: Swainson's thrush

Treatment: Prune and release all potential crop trees and plant 20 rare native species of shrubs and wildflowers such round leaf dogwood, witch hazel, yellow violet and hairy sweet cicely.

Stand #13 (0.44 ha):



A young stand resulting from a narrow strip cut out from Stand #3, most likely a fuelwood cut that was fairly common on public forest land during the mid-1980s. Competition between the large numbers of immature deciduous trees has caused straight, clean growth and good height. The stand runs north-south near the middle of the property, bordering on the southern boundary. The land in this area slopes gently to the south.

Drainage: high **Watercourse:** no

Ploughed: no

Origin: clear cut

Dominant and codominant trees:

#1: white birch 50% of stand age: 12-15 Diameter: 10.3cm Ht: 8.8m

#2: American beech 20% of stand age: 12-15 Diameter: 5.8cm Ht: 9.5m

#3: pin cherry 20% of stand age: 12-15 Diameter: 6.8cm Ht: 8.5m

#4: yellow birch, red maple 10% of stand age: 12-15 Diameter: 7.5cm Ht: 9m

Tree source: stump sprout: 20% seed: 80% plantation: 0%

Maturity class: immature

Canopy description: short closed

Stocking: overstocked

Tree quality: high

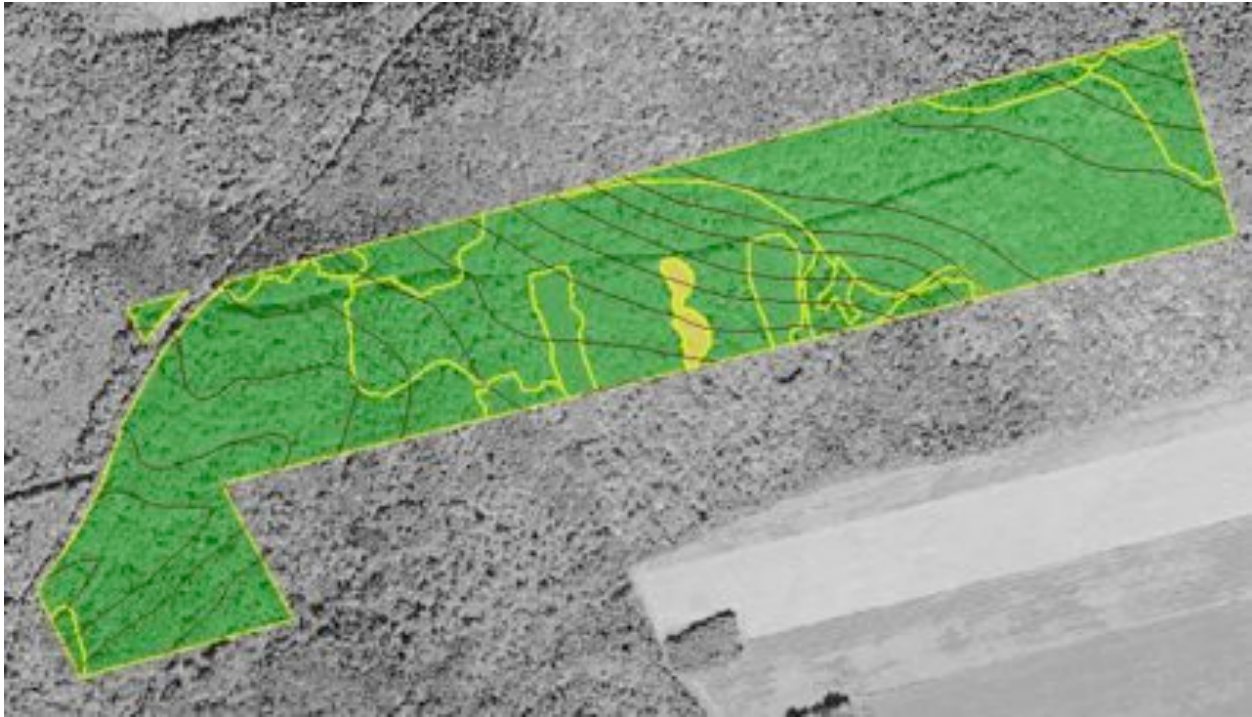
Regeneration <5m: some #1: balsam fir Ht: 0.15m #2: red maple Ht: 0.1m #3: sugar maple Ht: 0.1m

Other plant species: starflower, wood fern, bristly clubmoss, Indian pipe

Total % ground cover: 0% moss 0% shrub 5% flower 5% tree

Coarse woody debris: low **# Snag trees:** low **Quality of snags:** low
Wildlife:

Treatment: Prune and release potential crop trees, such as yellow birch, white birch and clean American beech.

Stand #14 (0.23 ha):

Another small stand very similar to Stand #12 in age and growth characteristics, but with a different species composition. As in the previous stand, it is young and resulted from a narrow strip cut out from Stand #3. Competition between the large number of immature deciduous trees has caused straight, clean growth and good height. The stand runs north-south near the middle of the property, bordering on the southern boundary. The land in this area slopes gently to the south.

Drainage: high

Watercourse: no

Ploughed: no

Origin: clear cut

Dominant and codominant trees:

#1: white birch 60% of stand age: 12-15 Diameter: 5cm Ht: 8.5m

#2: gray birch 10% of stand age: 12-15 Diameter: 6cm Ht: 9.3m

#3: yellow birch 10% of stand age: 12-15 Diameter: 7.6cm Ht: 9.5m

#4: pin cherry 10% of stand age: 12-15 Diameter: 5.6cm Ht: 11 m

Tree source: stump sprout: 20% seed: 80% plantation: 0%

Maturity class: immature

Canopy description: short closed

Stocking: overstocked

Tree quality: medium

Regeneration <5m: some #1: yellow birch Ht: 0.2m #2: balsam fir Ht: 0.1m #3: white spruce Ht: 0.1m #4: red maple Ht: 0.1m

Other plant species: large-toothed aspen, starflower, American beech

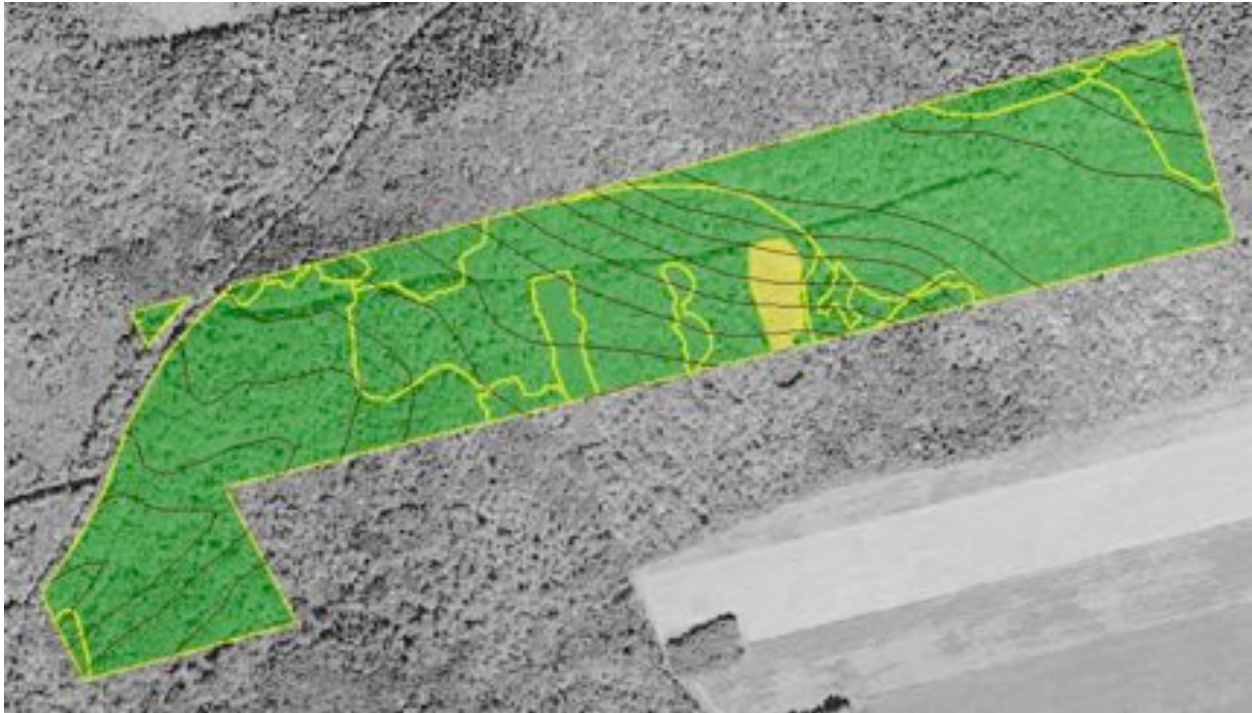
Total % ground cover: 5% moss 0% shrub 5% flower 5% tree 85% leaf litter

Coarse woody debris: low # **Snag trees:** low **Quality of snags:** low

Wildlife: Swainson's thrush

Treatment: Prune and release potential crop trees, such as yellow birch, white birch and large-toothed aspen.

Stand #15 (0.45 ha):



Another small stand very similar Stands #12 and #13 in age and growth characteristics, but with yet another composition of species. As in the previous two stands, it is young and resulted from a narrow strip cut out from Stand #3. Competition between the large numbers of immature deciduous trees has caused straight, clean growth and good height. The stand runs north-south near the middle of the property, bordering on the southern boundary.

Drainage: high **Watercourse:** no

Ploughed: no

Origin: Clear cut

Dominant and codominant trees:

#1: Balsam fir 30% of stand age: 12-15 Diameter: 7.7cm Ht: 8m

#2: White birch 30% of stand age: 12-15 Diameter: 8.1cm Ht: 10m

#3: Yellow birch 20% of stand age: 12-15 Diameter: 6.1cm Ht: 10m

#4: Red maple 10% of stand age: 12-15 Diameter: 6.4cm Ht: 9m

Tree source: stump sprout: 20% seed: 80% plantation: 0%

Maturity class: immature

Canopy description: short closed

Stocking: overstocked

Tree quality: medium

Regeneration <5m: medium #1: balsam fir Ht: 1.5m #2: red maple Ht: 0.15m

Other plant species: veronica, starflower, wild lily-of-the-valley

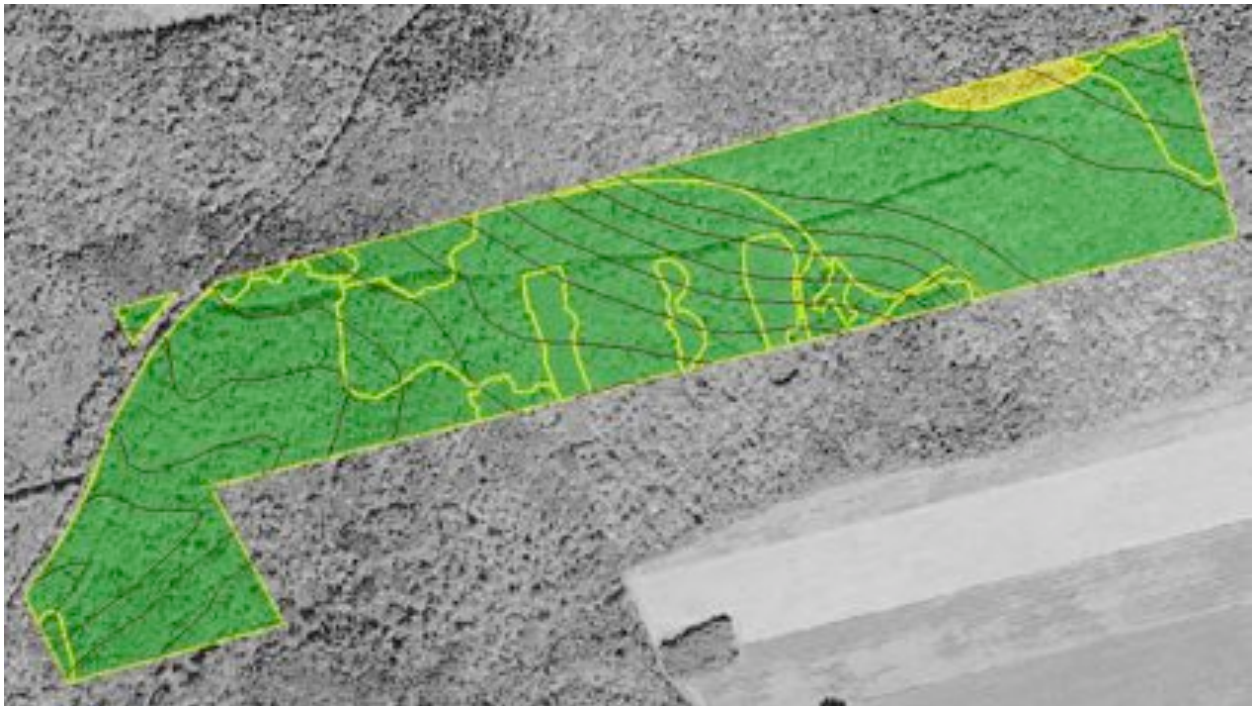
Total % ground cover: 10% moss 0% shrub 10% flower 10% tree

Coarse woody debris: low # **Snag trees:** low **Quality of snags:** low

Wildlife:

Treatment: Prune and release potential crop trees such as yellow birch, white birch and red maple. There are a few patches of balsam fir that can be removed to create openings in the stand, where eastern hemlock, sugar maple, yellow birch and white pine from the road can be added.

Stand #16 (0.35 ha):



This is a flat stand at the back along the northern property boundary. The understory is a nice, shaded environment well-suited to a diverse community of ground plants. This stand has the second highest diversity within the property. There is a distinct patch of large balsam fir (21.8cm diameter and 17m Ht) and very large white birch (43cm diameter). The woods making up this patch are tall and open, since some of the balsam fir are dead. The patch is experiencing a boom in balsam fir regeneration. There is also good regeneration of American beech, red maple, striped maple and yellow birch.

Drainage: high

Watercourse: no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

#1: red maple 40% of stand age: Diameter: 10.6 cm Ht: 15m

#2: white spruce 20% of stand age: 60-70 Diameter: 33.5cm Ht: 17.5m

#3: yellow birch, sugar maple, American beech 20% of stand age: 60

#4: balsam fir, striped maple 10% of stand age:

Tree source: stump sprout: 20% seed: 80% plantation: 0%

Maturity class: mature

Canopy description: tall and patchy

Stocking: understocked

Tree quality: medium

Regeneration <5m: high #1: balsam fir Ht: 0.15m #2: red maple Ht: 0.15m #3: striped maple Ht: 0.15m #4: sugar maple Ht: 0.1 #5: trembling aspen Ht: 0.1 #6: white spruce Ht: 0.1

Other plant species: wild raisin, ground hemlock, American mountain-ash, sarsaparilla, starflower, wild lily-of-the-valley, common lady's slipper, painted trillium, false solomon's seal, wild cucumber, ground pine, lung lichen, wood fern, old man's beard, bracken fern, Indian pipe,

Total % ground cover: 10% moss 0% shrub 20% flower 60% tree

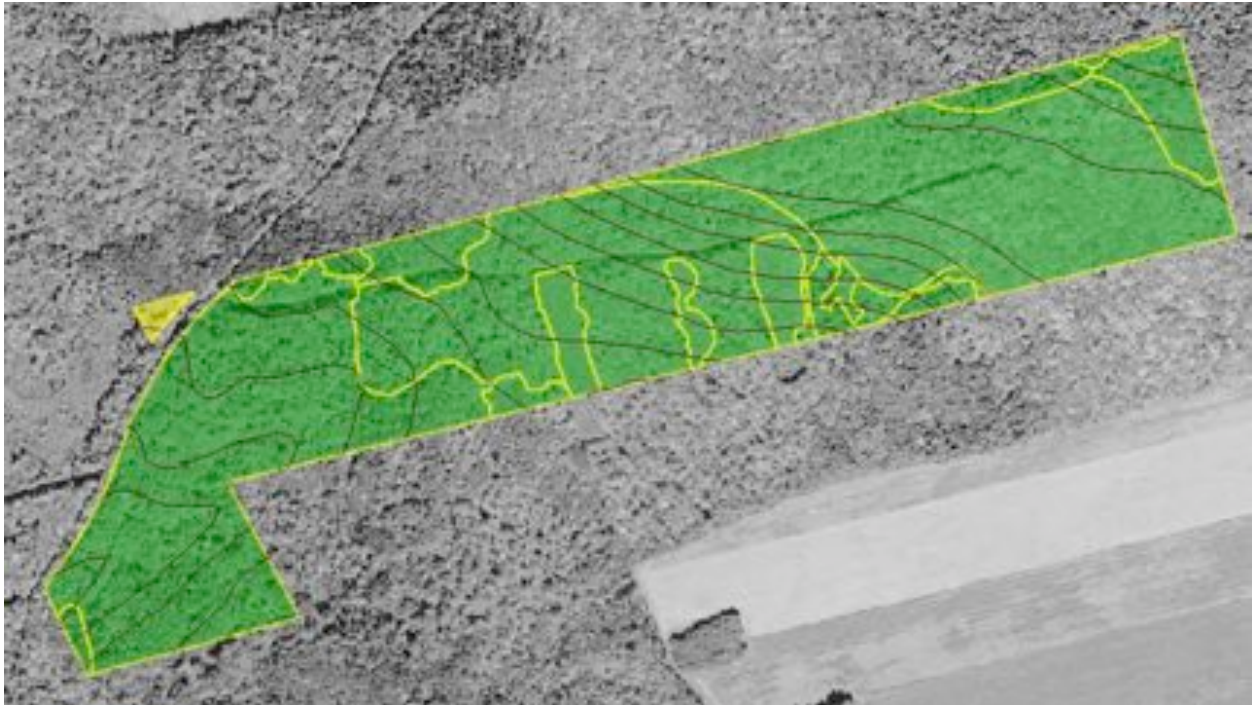
Coarse woody debris: low # **Snag trees:** low **Quality of snags:** medium

Wildlife: blue jay, black throated green warbler

Treatment: Release and prune all potential crop trees. Cut some of the deformed or less healthy trees for fuel and use those opening for plantings. The fuelwood patch cuts will be excellent places to plant eastern hemlock, red spruce and white pine.

The area with balsam fir and white spruce can be cut as a patch cut, making sure to leave sufficient wildlife trees. The extensive balsam fir regeneration will have to be controlled, either by pulling or by cutting. Both red oak and white ash should be planted in this area, along with a mix of rarer shade tolerant trees and shrubs.

Stand #17 (0.11 ha):



Located across the Jack's Road, this is a small, isolated triangle of land located on the northwest corner of the property. There are two tracks in the stand, one along the northern boundary and another towards the middle. Both tracks meet in the northeast corner of the stand and keep going in the next property.

Drainage: high **Water course:** no

Ploughed: no

Origin: partial cut

Dominant and codominant trees:

#1: yellow birch 40% of stand age: 60 Diameter: 21cm Ht: 16m

#2: American beech 30% of stand age: 60 Diameter: 21.3cm Ht: 16m

#3: eastern hemlock 10% of stand age: 150 Diameter: 51.5cm Ht: 18m

#4: white birch, red spruce, balsam fir, red maple 20% of stand age: 60

Tree source: stump sprout: 10% seed: 90% plantation: 0%

Maturity class: mature

Canopy description: tall and very patchy

Stocking: understocked

Tree quality: medium

Regeneration <5m: low #1: balsam fir Ht: 1m

Other plant species: sarsaparilla, starflower, wild lily-of-the-valley, wood fern, old man's beard, ground pine, bristly clubmoss, Indian pipe

Total % ground cover: 10% moss 0% shrub 0% flower 0% tree

Coarse woody debris: low # **Snag trees:** low **Quality of snags:** low

Treatment: Release and prune all potential crop trees, including yellow birch, white birch, red maple, red spruce and clean American beech. Throughout the stand, plant 25 shade tolerant shrubs, such as hobblebush, witch hazel, alternate leaf dogwood, round leaf dogwood and beaked hazelnut.

- Priorities:**
1. Keep the roadway clear from overgrowing trees to maintain a reasonable access through out the property. Given the property's isolation, it will be necessary to put up a gate or somehow block the entryway. Otherwise, any fuelwood or lumber left on site will be at serious risk of theft.
 2. All stands in the property needs shrub species to increase diversity and improve the health of the forest. The shrubs will also provide a much wider variety of food sources than what presently exists.
 3. There is an overwhelming number of dead balsam fir in many of the stands. Those areas should be the first to be planted.
 4. Selectively harvest some of the worst-quality trees for fuelwood in stands #1, #2, #5, #6, #8, and #18. This is a good way to create patch cuts that will be used for plantings. Hardwood lumber and wood for local craftspeople will also come out of these cuts.
 5. When possible, use the trees growing on the road for plantings, especially the eastern hemlock and yellow birch.
 6. Prune and release young potential crop trees in Stands #13, #14 and #15.
 7. Regularly remove some of the balsam fir in Stand #4 and Stand #6, creating places to plant a variety of native trees and shrubs.

Additional comments: Direct seeding of red oak should be tested where possible as an inexpensive but effective way to propagate this high-value species.

Once these plantings are done, look to add more wildflowers and ferns that will help make the property more diverse and more attractive to wildlife and human visitors alike.