

# Forest Management Plan

Prepared For:

Sprout Creek Farm  
Lauer Road  
Lagrangeville, NY

October 2011

Prepared by:

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## Introduction

This Forest Management Plan applies to the forest area lying to the south west of Lauer Rd. in the Town of Lagrange, owned by the Order of the Sacred Heart, dba. Sprout Creek Farm. These lands comprise the forested areas of two parcels. The first includes 12 acres within the parcel # 133400-6460-03-139125-0000 and the second includes 14 acres lying within the parcel # 133400-6460-03-075247-0000.

Goals of the Forest Management Plan include continued production of forest products, primarily including saw logs, but also with future products to include firewood. Access to these forested areas is also a goal, and is provided with an existing well-established forest road system. Maintenance of these roads is also a goal. Recreation including hunting, picnicking, camping and hiking continue to be a use of the property, and remain an important goal.

In 2002 a timber harvest was performed on the south-west portion of the property, indicated as Stand 1 (please see the Forest Type Map, included in this plan). During this harvest approximately 21,000 bd. ft. of saw timber was produced, and many of the roads were established. Oaks (red, black and white), sugar maple and some other mixed hardwoods were harvested, and the stand was left with good residual species and stem quality. Evidence of prior harvesting (before 2002) exists in Stand 1, and can be seen as old, large decaying stumps. Stand 2 shows no evidence of past harvesting. Stand 2 contains a small tributary to the Sprout Creek flowing toward the east, located in the southern end of the stand.

### **Property Boundary Designation:**

The property boundaries are identifiable and posted. Identification of the boundaries is also enhanced by differences in land use, and by the presence of stone walls in many areas.

## **General Site Characteristics Affecting This Management Plan**

### **Slopes:**

Slopes within Stand 1 vary in intensity and direction, and show some areas in the eastern portion of the stand with slopes of 20%. These areas showed some erosion along forest roads located there, so some road improvement should be planned in these areas. This should follow guidelines in the NYS Best Management Practices for Water Quality: Published in 2000.

Slopes in Stand 2 vary from level to 5%. A slight south east orientation exists, toward the small tributary stream.

### **Wildlife Habitat Potential:**

Some vertical structural diversity within the stands and borders of residential properties and land use changes creates good cover for white-tailed deer and upland game. Much evidence of deer presence was seen, including some deer sighted. Limited aquatic habitat exists, but the presence of the small stream in Stand 2 and several small wet areas creates habitat for reptiles and amphibians.

No Threatened or Endangered species were identified on the site.

**Soil and Water Protection:**

Surface water quality will be most effectively enhanced by controlling erosion on forest roads and during harvesting operations. This can be done by installing water bars on roads in Stand 1, and by installing erosion-control devices on roads with a slope of over 15%. Roads installed should be seeded after use, to stabilize soils and prevent silting.

A check of NYS DEC wetlands maps and NWI maps revealed no state or federal wetlands present in the areas included in this Forest Management Plan.

Ground water resources can be protected by maintaining wet areas of the site, in both stands, to maintain any aquifer recharge they may be doing. Any equipment used during road construction or harvesting should be checked for fluid leaks and repaired before use, and fueling/maintenance should be done in a single area, to limit the potential impacts of spills.

**Fisheries:**

No standing water bodies exist on the parcels, and the stream in Stand 2 is not large enough to support significant fish populations. Fisheries concerns exist with maintaining the purity of this stream, to assure no pollution travels downstream. The stream should be protected during logging, by limiting the impacts of logging slash, siltation and heavy equipment.

**Recreation and Aesthetics:**

Recreational and aesthetic resources of this site include hunting, hiking, camping and birding.

No historic, archeological, or culturally- significant sites were identified on these parcels.

**Forest Health:**

Forest health concerns on the property are centered around minimizing the spread of invasive plants including *Ailanthus altissima* and Japanese barberry. Several populations of these aggressive forest pests are present in all areas. TSI cuts, producing fuelwood, should be directed at eliminating low-value, declining trees where markets allow.

**Fire Potential:**

Available fuel levels are generally low throughout the site, with little slash present. The property is also wet, in spots, which also will reduce fire potential.

**Timber Resource:**

Most of the timber resource available within the next 20 years exists in the south western and central portions of the property, mostly in Stand 1. Good resources of maple, red, black and white oak exist and are of good quality. Good resources exist in sapling-sized maple and should be preserved during any future harvesting.

Stand 2 is smaller and younger, and will take longer to develop a harvestable timber resource. Species mix and quality here is good, and can be improved with future TSI work.

# Sprout Creek Farm

## Stand Table: Stand 1

Descriptive Forest Type: Northern Hardwoods

Area: 12 acres

Basal area/ acre: 105 ft.<sup>2</sup>/ac.

Average DBH: 14.8"

Trees / acre: 533

Average Height: 55 ft.

Percentage 'undesirable growing stock' (UGS): 14%

Site index: 2

Species Abundance: sugar maple 57%, black oak 24%, red oak 9%, white oak 5%, hickory 5%

Stand Characteristics: This stand shows good resources of sugar maple and oak, and many trees of good quality. Past harvesting has maintained good quality in all age classes in this stand. Great resources of sapling and small-pole sized sugar maples exist, as well as a developing number of small sawtimber trees. Access is good and provided by a system of forest roads. These need some erosion control on the east side of the stand, where the primary access road comes off the drive from Lauer Road.

Stocking: Stand 1 is an Uneven-Aged Northern Hardwood stand, growing on site 2 moderately-well drained soils. This has good potential for future timber production. When the stand statistics were compared to the stocking guide for Northern Hardwoods, published by Leak, Solomon and DeBald, US Forest Service publication NE-603, the stand fell  $\frac{3}{4}$  of the way to the A line (or fully stocked). This means that harvesting is possible where basal area/ acre could be reduced to 80 ft.<sup>2</sup>/ac., and trees per acre could be reduced to 400. If these density goals are achieved, the site would still fall above the B line (the level of minimum stocking), and site resources can then be focused on smaller trees of good quality. Harvesting must minimize damage to young, developing sapling and pole-sized trees to allow these trees to fully-utilize the site.

### **PRESCRIPTION:**

**2011-2012: Stand 1** : Harvest marked hardwoods as planned to remove on average 8 trees per acre (18,894 M bd. ft.)

**2017-2018: Stand 1:** Reinventory to monitor growth and development

# Sprout Creek Farm

## Stand Table: Stand 2

Descriptive Forest Type: Northern Hardwoods

Area: 14 acres

Basal area/ acre: 187 ft.<sup>2</sup>/ac.

Average DBH: 9"

Trees / acre: 714

Average Height: 45 ft.

Percentage 'undesirable growing stock' (UGS): 12%

Site index: 2

Species Abundance: sugar maple 72%, white ash 8%, red maple 8%, cherry 8%, red oak 4%, elm also present

Stand Characteristics: This young stand shows good resources of sugar maple, and many trees are of good quality. Ash is a component of this stand, as well as American Elm. Both of these species are of concern for their long-term survival because of insect (Emerald Ash Borer) and disease (Dutch Elm Disease) threats. The stand has a developing sawtimber crop in the maples (both sugar and red) that can be improved by providing more site resources such as light and soil nutrients. Pre-harvest thinning to produce firewood would be a way to refocus these site resources onto the better trees.

Stocking: Stand 2 is an Even-Aged Northern Hardwood stand, growing on site 2 moderately-well drained soils. This has good potential for future timber production. When the stand statistics were compared to the stocking guide for Northern Hardwoods, published by Leak, Solomon and DeBald, US Forest Service publication NE-603, the stand fell significantly above the A line (or fully stocked). This means that the density should be reduced, to remove excess stems prior to their dying, due to competition. A possible target would be to reduce the trees/acre value by 200-300, and focus thinning on removal of poor-quality stems and undesirable timber species (such as elm). This thinning target would bring the stocking about half way between the A and B lines on the referenced stocking guide. Marking should also concentrate on releasing the crowns of potential crop trees, of the desirable species. Harvesting must minimize impact to the tributary stream at the south end, and should use a stream buffer and qualified crossing methods.

### **PRESCRIPTION:**

**2011-2014: Stand 2** : TSI (Timber Stand Improvement) thinning to produce firewood, reducing the trees/acre value by 200-300.

**2017-2018: Stand 2:** Reinventory to monitor growth and development

# Annual Forest Management Summary

Sprout Creek Farm

2011

## 2011-2012:

- **Stand 1** : Harvest marked hardwoods as planned to remove on average 8 trees per acre (18,894 M bd. ft.)

## 2011-2014:

- **Stand 2** : TSI (Timber Stand Improvement) thinning to produce firewood, reducing the trees/acre value by 200-300.

## 2017-2018:

- **Stands 1 and 2:** Reinventory to monitor growth and development

## 2022-2023:

- **Stands 1 and 2:** Reinventory to monitor growth and development