

NH TREE FARM MANAGEMENT PLAN

FOLLANSBEE FOREST

Location, History and Character

The Follansbee Forest is eleven (11) acres bisected on the south side by Saunders Hill Road, located in the Town of New Boston designated as map 2 lot 144 on the town's tax map. Access to the Follansbee Forest is by Tucker Mill Road to the east and Saunders Hill Road that splits the Forest with 75% on the north side and 25% on the south side of Saunders Hill Road.

There is no trail system on this lot, nor is one being planned. The notable manmade features on this lot are stone walls on the north side and along a small stream. The walls may have served to divide pastureland in the nineteenth century.

The Follansbee Forest has an interesting history similar in character to much of New Boston's native lands. There is a stone foundation built before 1858. The Follansbee's lived at this location starting in 1954. The house was removed in 1989. The pastureland around the homestead now has grown to be the Forest we have today. In 1978 the land and the house were taken over by the Town of New Boston due to non-payment of property tax and placed under the care of the New Boston Forestry Committee. In 1996 the Hillsborough County Forester completed a management plan followed by a selective cut along with Timber Stand Improvement (TSI) work. In 2000 lot boundaries were marked by small signs. In 2017 a compass and tape survey were executed, and map drawn up for working files. Six sample plots were laid out in 2017 and basal areas and estimated board footage per acre were calculated in the 1/10th acre plots.

Species inventory of those 1/10th acre plots included any tree over six (6) inches in diameter and significant note was taken of all undergrowth in each plot.

NEW BOSTON FORESTRY COMMITTEE GOALS

The New Boston Forestry Committee (NBFC) is developing a plan to manage the Follansbee Forest as an area to support wildlife, protect water quality (ex. Vernal pools, small streams) and create a sustainable forest.

The goal of silviculture practices will be to create and maintain an uneven forest; a stand with three or more age classes, increasing species, and size class diversity.

NBFC recommends a blend of group selection and single tree selection, harvesting to create openings of $\frac{1}{4}$ acre, removing clumps of mature or defective trees thus allowing the White Pines to regenerate.

The management practice of creating an uneven stand will provide market diversity, protection of surface water, and habitat for wildlife. Harvesting cycles may be changed due to insect infestation, diseases, ice damage, drought, or declining markets. Uneven stands are considered self-sustaining. Employing the silviculture practices as identified above, ought to protect the Follansbee Forest against market changes and provide diversity within the Forest. Care must be exercised during any harvest to ensure that existing regeneration is not damaged.

NBFC does not recommend Bio-mass whole tree harvesting in this Forest. This will ensure maximum nutrient return to the soil. Slash from any harvest is to be left to create a habitat for wildlife and will serve to stop soil erosion.

The NBFC will conduct their management activities in compliance in compliance with all applicable New Hampshire Forest Laws, RSA-79 (Timber Tax Law), RSA 227-J (Timber Harvesting Law), RSA 482-A (Dredge and Fill in Wetlands), and RSA 483-B (Comprehensive Shoreline Protection). The committee will employ best management practices for erosion control on timber harvesting operations as recommended by the New Hampshire DRED and the University of New Hampshire Cooperative Extension service in 2000. Furthermore, planning and implementation of forestry operations shall be coordinated with other critical silviculture

practices. Such practices will include maintaining an uneven aged forest as a hedge against the ecological effects of weather and disease and to increase biodiversity. As guidance documents for this endeavor the committee will use such publications as “Good Forestry in the Granite State”, Forestry Management Practices for NH” (NHDRED 1997) and “Uneven-Aged Management of Northern Hardwood in New England” by William B. Leak and Stanley M. Filip, USDA Forest Service Research Paper NH-332 (1975).

All work on the Follansbee Forest will be planned by the New Boston Forestry Committee, Hillsborough County Forester and a Licensed Forester as needed.

SOILS

The Follansbee Forest soil type is Canton (CMC). The average slope is eight (8) to fifteen (15) percent. Bedrock depth is more than five (5) feet and erosion hazard is slight, as is the risk of wind throw. Seedling mortality risk is also slight due to favorable conditions in the Forest. The soil site index is fifty-eight (58) for White Pine, seventy-three (73) for Red Pine and fifty-two (52) for Red Oak.

BOUNDARY LINES

Boundary lines will be maintained by the NBFC. The lines are to be painted every five (5) years.

ENDANGERED SPECIES

See Appendix attached for findings from the NH Natural Heritage Bureau. Contact with NH Fish and Game may be required before harvesting forest products. Telephone for NH Fish and Game is 603-271-6544.

Natural Communities

After reviewing the book "The Nature of New Hampshire" by Dan Sperduto and Ben Kimball 2011, There appear to be no special features in this forest.

WETLANDS

This Forest has a small stream and vernal pools. Protection of these water sources are important during and after harvest.

Vernal pools are to be protected. These pools and the adjacent forest are important to water quality and the wildlife that inhabit the vernal pools.

The area surrounding the vernal pools up to a two hundred (200) foot diameter serve as the areas for reptile and amphibian breeding. Before any harvesting the location of the pools shall be identified in the spring. Removal of trees in these areas shall be limited. Canopy cover shall not be removed below fifty-five (55) %. Slash shall be removed from the vernal pools. Trees that have canopies covering the vernal pools are not to be removed. The canopy serves to regulate the temperature of the vernal pool and keep the temperature down. Machinery is not to be operated in the vernal pools.

There is a small stream in the Forest. The stream feeds directly into the Piscataquog River. Logging skid trails must be kept away from this stream. Trees fifty (50) feet either side of the stream are not to be removed. The practice of leaving trees close to the stream will protect amphibians and reduce soil erosion into the stream.

HEALTH

Tree quality and stand health are at a high level within the dominant species. There is no evidence of pathogenic organisms.

Eastern Hemlock within this Forest require yearly monitoring for Woolly Adelgid and Elongate Hemlock Scale. (see photos below) If these pests are found, the NBFC must determine the extent of the infestation and develop the appropriate action plan.



Woolly Adelgid



Woolly Adelgid



Elongate Hemlock Scale

There are invasive plant species present in stands #2 and #3 in the Forest. These areas are where the old Follansbee house foundation is located and along the northern side of Saunders Hill Road. The total area where the invasive species grow is approximately two (2) acres.

NBFC recommends that the invasive species be removed with a small excavator. The area around the foundation is to be planted with White Pines and stand #3 will be thinned, not harvested. The committee will monitor for the presence of the Woolly Adelgid and the Elongate Hemlock Scale.

The use of chemical controls (herbicides and pesticides) are not permitted in this area due to the proximity to the Piscataquog River.

WILDLIFE

The Forest serves as a habitat for a wide range of animal species. The NBFC will protect the wildlife currently in this Forest as outlined in the management plan. An uneven forest will be maintained and is likely the best practice to sustain the existing wildlife.

ACCESS

The access to the forest is very good. There are two (2) town- maintained roads, Tucker Mill Road and Saunders Hill Road, that are adjacent to this forest and provide easy access off public roads.

RECREATION

There are no trails in the Forest. The abutting Betsy Dodge Conservation Land does have trails for public use.

No trails are planned for the Follansbee Forest. The Forest may be used by hunters in season and is available for the enjoyment of the public.

MANAGEMENT OF FOREST STANDS

Follansbee Forest consists of three (3) stands, each requiring a different management practice. Following is a description of each stand and the corresponding NBFC recommendation.

STAND #1

Stand #1 is 8 +/- acres in size and is composed of predominantly White Pine. The White Pine ranges from 6" to 32" Diameter at Breast Height (DBH). The average basal area is 208 square feet per acre. NBFC recommends that the White Pine is to be harvested to achieve a basal area of 120 square feet per acre. Growth ring samples should be taken on a few White Pine trees with less than a 12" DBH to determine growth rates. Under-performing trees should be removed.

The goal in this stand is to create an uneven growth stand, using single tree selection as well as group tree selection. Harvesting needs to be done to promote regeneration of White Pine. A 20-year harvest cycle is the goal, without high grading the stand.

Stand #1 also supports the growth of a small number of Eastern Hemlock. Currently, the Eastern Hemlock has little commercial value. It should be monitored for Woolly Adelgid and Elongated Hemlock Scale.

If these pests are identified after yearly inspections, either in a single tree or a small stand, the tree should be cut down and the foliage burned. Check with the New Boston Fire Department for requirements. If the entire stand is infected the NBFC recommends a salvage harvest. Care must be exercised to stop the spread of these pests to neighboring parcels.

STAND #2

Stand #2 is an area of approximately 2 acres. This stand has no marketable timber. It does have a problem with invasive species.

After consulting with the UNH County Extension Service Forester, the NBFC recommends that the invasive species are to be removed with an excavator. After removal of the invasive species, White Pine seedlings are to be planted. If/when the invasive species return, they are to continue to be removed until the White Pine establish dominance in the stand.

STAND #3

Stand #3 is 1+/- acre in size. Invasive species grow along the edge of Saunders Hill Road. There is also a small mix of hardwoods.

NBFC recommends the removal of invasive species using mechanical means, such as a small excavator.

The mixed hardwood is to be thinned enough to release the trees to maximize their growth, but not so much as to allow the invasive species to get a foot hold in the stand.

GOAL IMPLEMENTATION CRITERIA

All forestry operations shall be planned by the NBFC assisted by the NH Hillsborough County Forester and a licensed forester, if necessary. Actual harvesting operations will be limited by the following parameters:

- 1) Small mechanical logging equipment is to be utilized to limit soil damage.
- 2) Bio-mass tree harvesting is not recommended for this forest.
- 3) Slash is to be left on the forest floor and cut down to a height of less than three (3) feet. The practice of leaving slash on the forest floor will serve to decrease soil erosion and protect seedlings from temperature extremes. The nutrients from the slash will be added back in to the soil. Small micro habitats are thus created for small mammals, birds and reptiles.
- 4) Use of herbicides or pesticides is not permitted.
- 5) Removal of invasive species may be completed by hand or with the use of appropriate mechanical equipment.
- 6) Timber Stand Improvements (TSI) shall be accomplished by selecting the most vigorous trees and those that appear to be the most genetically superior. During the harvest caution shall be exercised to avoid damage to existing seedlings and other trees.
- 7) The market price of various species of timber shall be considered carefully before any harvesting takes place.
- 8) Harvesting is to be conducted in the winter or at a dry time of year, namely July, August, September.
- 9) Care shall be taken to protect wetlands, streams and vernal pools during harvests. Best Management practices (BMP) shall be used to stop erosion and to layout of skid trails.
- 10) Public – The Forest is owned by the Town of New Boston. The Forest shall be open to the public during any harvesting operations. Opportunities for education of the public and school children may exist during the harvests.

FOREST MANAGEMENT ACTIVITY SCHEDULE

STAND#1

2018 - Core samples for a few White Pine under 12" DBH are to be taken. Monitor the Hemlock for Woolly Adelgid and Elongate Hemlock Scale.

2019 – Harvest White Pine utilizing single tree and group selection practices. Harvest to attain an uneven stand. Exercise caution, do not high grade the stand. Remove low grade White Pine, Hemlock and mixed hardwood. Monitor for Hemlock pests.

2020-2027 – Monitor Hemlock for pests. Check boundary lines and repaint boundary lines every 5 years.

2028 – Measure basal area of White Pine. Conduct TSI work as needed.

STAND #2

2018 – Remove invasive species.

2019 – Check for invasive species and remove any plants that are found. Plant White Pine seedlings.

2020-2028 – Monitor stand for invasive species. Remove any invasive species that are found.

STAND #3

2018 – Remove invasive species.

2019 - Remove low grade mixed hardwood trees, leaving a stand with crowns which shadow the forest floor.

2020-2028 – Monitor for invasive species, remove any that have grown.