

Managing Your Woodland:

Owner Name: _____

Owner Mailing Address: _____
_____ **Livingston Manor, NY** _____

Owner Phone Number: _____

Owner Email: _____

Owner Signature: _____

Plan Author: _____

Plan Author Mailing Address: _____

Plan Author Phone Number: _____

Plan Author Email: _____

Plan Author Signature _____

Date of Original Plan Completion December 2017 **Revision date(s)** _____

Please note: Informal updates to the plan can be made with handwritten notes. Be sure to include a date and initial these notes throughout the management plan.



TABLE OF CONTENTS

| | |
|---|----|
| Property Description..... | 1 |
| Property History..... | 3 |
| Forest Management Goals..... | 3 |
| Property and Soils Map | 5 |
| Soils Map Legend and Soil Types..... | 6 |
| Forest Natural Resources Enhancement and Protection | 7 |
| Air, Water, and Soil Protection..... | 8 |
| Fish, Wildlife and Biodiversity | 9 |
| Management of Forest Resources | 10 |
| Stand 1 | 12 |
| Stand 1 Objectives | 12 |
| Stand 1 Current Conditions..... | 12 |
| Composition | 13 |
| Diameters..... | 13 |
| Relative Density..... | 14 |
| Timber volume..... | 14 |
| Timber value..... | 14 |
| Stand 1 Desired Future Stand Condition | 16 |
| Stand 1 Forest Management Activities | 17 |
| Management Activity Schedule and Tracking..... | 19 |
| Signatures and Approvals | 20 |

Property Description

Legal property description

Nearest city or town Livingston Manor, NY

Tax Parcel Number (optional) _____

FSA Farm and Tract Numbers (if applicable) _____

GPS coordinates (optional) _____

Total ownership acreage 22.3 acres Total forested acreage 22.3 acres

Total acreage covered by this plan 22.3 acres

Number of unique stands of trees 1

Do you reside on the property?
Yes No

Basic topography (estimate percent of total acreage that is)

Complex topography (many steep ravines and aspects)

Simple topography (few ravines and changes of aspect)

Percent of land that is Flat (<5% grade) 0 Gentle Slope (6 to 20% grade) 20

Steep Slope (> 21% grade) 80

Road Conditions (check): Excellent (80% accessible) Good (at least 50%)

Fair (at least 25%) Poor (less than 10%)

Estimated improved road length (bulldozed with graveled surface) 0 miles

Estimated unimproved road length (bulldozed with but original soil/bedrock) 0 miles

Which watershed is the property located in (include appropriate watershed unit for your state):

Watershed Name: East Branch Delaware USGS Cataloging Unit: 02040102

Property History

Forest Management Goals

The primary objective is to manage the parcel for habitat; primarily, but not exclusively, for passerine songbirds. This would include retaining a primarily forested character throughout the stand, which would require managing for a diverse tree community with multiple age classes. There are relatively few ways to address this across the parcel, as it is located in a landscape that is predominantly forested (85-90% forest cover) with very little young forest habitat type (<5%). In this landscape context, the primary approach would involve creating young forest habitat (*Treyger, S.M., Burger, M.F. 2017. Forest Management for New York Birds: A Forester's Guide. Audubon New York*), which would involve either even-aged techniques or uneven-aged approaches that would create some group openings, with the amount dependent on the length of the rotation, in this case approximately 120 years. Due to the small size of the parcel, very steep slopes, and a desire to maintain a primarily forested character, uneven-aged forest techniques, specifically group selection, would need to be the primary approach

Conversion of an even-aged forest stand to uneven-aged forest structure requires multiple entries and long-term commitment to properly achieve multiple age classes in appropriate proportions that approximate an idealized forest structure via techniques such as the Arbogast/reverse-J curve or Q structure. When using a group selection approach, the conversion process would be initiated by removing groups of trees (0.1 - 0.25 acres) that are over-mature or least likely to survive for 15-20 years; in addition to maintaining high quality trees that can gain additional volume and provide seed source to initiate the regeneration process. Concurrently, the remaining stand should be thinned lightly to promote increased growth and vigor for leave trees.

In approximately 15 years, if the regeneration process is successful (as long as invasive or interfering species do not prevent successful levels of desired species' establishment), additional groups can be removed, and allow for another age class to become established. During this time, some of the leave trees must be allowed to grow beyond their financial (>24 inches DBH) or biological (species dependent, but usually >30 inches DBH) maturity to constitute the oldest age class. From a habitat

perspective, it is also desirable to leave some very large trees, particularly if they have cavities, in addition to snags. It is likely that after another 15 year cycle of these entries (3rd cut), there will be at least 3 age classes present, and the primary goal of the conversion will be achieved. At the same time, the youngest age classes will not be financially or biologically mature, and some of the mature trees will need to be allowed to continue growing. However, additional entries into the stand will be required in a 15 year cycle to maintain the uneven-aged structure, and continue promoting quality habitat.

Property and Soils Map

Soils Map Legend and Soil Types

The soil abbreviations below use symbols found on the map on previous page. The information has been collected from the Soil Survey of Otsego County, New York.

CsF Cheshire channery loam, 35 to 60 percent slopes, stony

This is a very deep, very steep, well drained soil on the upper parts of valley sides and hillsides on uplands. The seasonal high water table in this Cheshire soil is generally at a depth of more than 6 feet. The available water capacity is moderate. Surface runoff is very rapid. Depth to bedrock is generally more than 60 inches. Potential productivity of this unit is moderate for northern red oak. Slope is a severe limitation to use of equipment. Erosion is a severe hazard.

HaE Hawksnest-Mongaup loams, steep, very rocky

This map unit consists of moderately steep and steep soils. It is about 40 percent Hawksnest soil, 40 percent Mongaup soil, and 20 percent other soils and rock outcrops. The Hawksnest soil is shallow and somewhat excessively drained or well drained. The Mongaup soil is moderately deep and well drained or moderately well drained. These soils are on mountainsides and ridgetops in the Catskills Mountains. Slope ranges from 15 to 35 percent. Bedrock is at a depth of 10 to 20 inches. Potential productivity of sugar maple on these soils is moderate. Rooting depth is severely restricted in Hawksnest soil.

HeF Hawksnest-Mongaup-Rock outcrop complex, very steep

This unit consists of very steep soils and areas of Rock outcrop. It is about 30 percent Hawksnest soil, 30 percent Mongaup soil, 25 percent Rock outcrop, and 15 percent other soils. The Hawksnest soil is shallow and somewhat excessively drained or well drained. The Mongaup soil is moderately deep and well drained or moderately well drained. These soils are on mountainsides in the Catskills Mountains. Slope ranges from 35 to 70 percent. Hard, grayish brown Bedrock is at a depth of 22 inches. Potential productivity of sugar maple on these soils is moderate. Rooting depth is severely restricted in Hawksnest soil and in areas of the included, very shallow soils.

MnC Mongaup loam, 8-15 percent slopes, very stony

This is a moderately deep, strongly sloping, well drained or moderately well drained soil on mountainsides and parts of bedrock-controlled benches in the Catskill Mountains. The available water capacity is moderate. Bedrock, commonly sandstone, is at a depth of 20 to 40 inches. Potential productivity of sugar maple on these soils is moderate. There are no significant limitations to woodland use and management.

Forest Natural Resources Enhancement and Protection

Special sites

There are no archeologically, geologically, biologically or ecologically special sites located at this ownership. Much of the stand has good visual and recreational appeal, due to its steepness and potential views of the valley, which is currently mostly obscured by trees. In addition, many rock outcrops in the stand provide an interesting visual character.

Adjacent stand or ownership concerns

This is a rural setting ownership with three parcels held by three owners directly bordering the 22.3 acre property, with one parcel adjacent to the property across the road held by the same owner. There is one residence located somewhat adjacent to the parcel (besides the owner's residence), somewhat near the western corner of the property. In addition, there is a third residence further to the northeast of the property, but there is no direct connection to or view of the property from this residence. None of the residences, except for the landowner's, are in immediate proximity to the forested portion of the property. None of the residences should be impacted by forest management activities on the property, but it would be a good idea to give advance warning prior to any extensive work taking place.

Recreation

There is no formal access to the property, and no access roads or trails lead to it, with the exception of Rd along the northwestern edge of the property. Rd does not allow for anything but foot traffic access to the parcel. The parcel is a steep hillside that can have an appealing visual quality with the potential to have great views of the adjacent ridge line and valley, due to steep slopes and a rapid decrease in elevation. These views may be improved with strategically located group cuts. Owners occasionally walk on the property, but due to a lack of an accessible trail system, the access can be somewhat dangerous due to the steep slope along the road. Owners are interested in creating a trail, which may be created in conjunction with the Open Space Institute. Forest management activities should improve accessibility to foot traffic via creating a navigable logging trail system, and will create sufficient access for the owners.

Access

The landowner has full legal access to the property. The boundary of the property is incompletely posted or otherwise delineated. There is no desired public access to the property along the road, however access may be opened along the aforementioned possible trail. The relative remoteness of the location,

steep terrain, and lack of apparent access are likely sufficient to keep out unwanted vehicular and foot traffic.

Air, Water, and Soil Protection

Soil protection

All state Best Management Practices (BMPs) applicable to soil protection on wet soils, and on steep, gentle and flat slopes shall be followed. There are no large sections of wet soils on the parcel, but some microtopographic features may have seasonally wet soils, and should be avoided during spring, heavy rainfall, or excessive rainfall years. The steepness of the terrain precludes mechanized access during the winter, and thus, best access times are during late summer/early fall, contingent upon lack of recent rainfall, when soils will be at their driest. The access skid trail layout shall minimize repetitive entries by increasing access to all parts of the stand.

Roads

There is a need to create some access to the property, as there is no road access to the property. The trails will need to have permanent features installed as necessary, including culverts, geotextile, gravel and water bars.

Streams, wetlands, ponds, lakeshore

There are no streams, wetlands, ponds, or lakes at the property. The nearest stream is the, located on the opposite side of the adjacent parcel. Forest management activities will not have a direct impact on the river, and in the long term will continue to provide high quality water by maintaining the parcel in a forested condition.

Effects of Natural Disasters

Regionally and locally, natural disasters that will most likely impact this ownership are severe wind storms, such as severe straight line winds or less likely, tornadic events, and ice storms. The impact of windthrow on the shallower soils is likely to be severe. The most appropriate course of action to prevent these effects from being magnified as a result of forest management activities on this portion of the ownership is to reduce compaction of soil by appropriate seasonal timing (i.e. late summer) of equipment entries, and utilizing proper BMPs during entries. Additionally, the regeneration or thinning activities undertaken should not allow for leaving 'hard' contiguous edges or severe reductions in basal area (such

as thinning to 'C level' or shelterwood regeneration strategies) that would allow all trees to fail during a severe weather event, particularly in areas where the parent material (i.e. rock outcrops) is close to surface. Ice storms are difficult to safeguard against; however, their impact is typically limited to form and tree value damage with relatively low tree mortality. The best course of action for ice and wind storms would be to evaluate the impact on the forest and adapt the management strategy to recoup the value via a salvage operation and adjust the planned re-entry times to fit the reality of stand conditions. Fires are unlikely in the region, and if they do occur, they are likely to be a relatively low temperature surface fire, with low mature tree mortality.

Fish, Wildlife and Biodiversity

Fish & Wildlife

The primary landowner objective regarding wildlife is to improve habitat for the largest number of species, with a focus on birds, such as passerine songbirds. Currently, the property has little habitat variety, with a dense single-story forest canopy, which precludes understory vegetation growth and a second or third canopy. This presents an opportunity to increase vertical and horizontal structural diversity for species with a preference for an open canopy and high vertical structural diversity component, which includes most mature forest wildlife species, such as migratory and nesting birds, as well as small and medium-sized mammals. It is likely that any forest management activities undertaken will increase deer presence on the property, due to the increase in edge and cover habitat. Due to negative effects of deer on regeneration density and quality, adequate regeneration is likely to be only possible with measures that would either effectively prevent most deer from entering the regeneration areas (such as fencing or intensive hunting), or at the minimum reduce the deer's ability to move into and within these areas (such as leaving large woody debris and slash to block entry). From wildlife and nutrient management perspectives, leaving coarse woody debris and tree tops at the edges of regeneration areas is the preferred approach, but access to fencing would improve the outcomes.

There is likely to be relatively little effect of forest management activities on amphibians. There is no fish on the wooded sections of the property, due to a lack of permanent water.

State and Federal threatened or endangered species - plants or animals

There are no known State and Federal threatened or endangered species populations on this property. There are no known hibernacula or roost trees for the northern long-ear or Indiana bats in the county or vicinity of the property.

Management of Forest Resources

Protection from Pests

There are several pests of concern present in the region that could have an impact on the forest. The most imminent threat in the region is the Emerald Ash Borer (*Agrilus planipennis*). It is currently not present on the property, with the closest known infestation located in the southern portion of Otsego County, centered on Unadilla. Currently, it is economically feasible to treat only individually important trees – visually or due to location, with very few, if any, trees in this category on the property. There is a pesticide (TreeAzin) approved for use in organic crops that may be applicable to use on this property. Alternatively, non-organic Tree-age pesticide has somewhat higher effectiveness against the borer.

Hemlock Woolly Adelgid (HWA - *Adelges tsugae*) is another spreading pest, which is not yet present at the property. However, as this pest spreads, it may cause problems for the ownership, due to a presence of hemlock on the property. Currently, methods of HWA control are not economically feasible for forest maintenance over this property size, but with continued research, release and ramp-up of HWA biological control populations (e.g., *Sasajiscymnus tsugae*), spot treatment of the most affected or visually valuable trees may be economically possible and beneficial.

Beech Bark Disease (BBD) is a complex of the beech scale insect (*Cryptococcus fagisuga*), which when feeding, introduces at least two fungi (*Neonectria* spp.) that produce cankers and over time kill individual stems. Beech trees, as a root suckering species, produce multiple stems around the parent tree, which will then be able to suppress any other species regeneration due to their high shade tolerance and connection to a root system with energy stores. These new stems retain their susceptibility to BBD, and perpetuate the cycle, which will eventually allow shrubby beech to dominate the stand. The most appropriate approach is to chemically control non-resistant beech. Up to 10% of beech are resistant to some degree and around 1% have almost complete resistance – these trees should be retained.

Reforestation and Afforestation

There is no additional area within the ownership that would require afforestation, due to the landowner desire to maintain the parcel near the residence in an open grassland condition. Reforestation is most likely to be achieved via natural means, with sufficient seed source from the mature trees. There are some interfering native plants in the stands, including grasses, ferns, hophornbeam, and American beech (some of which appears to be resistant to BBD). In addition, while not present in the stand, monitoring should be implemented for invasive species, such as honeysuckle, Japanese barberry, and multiflora rose. As stated previously, tops and other coarse woody debris, should be retained to create a barrier to deer movement within the stand, as well as placing temporary fencing to prevent their entry.

Management Plan Implementation Constraints

The primary constraint to the management plan implementation is the conservation easement held by the Open Space Institute, as it holds the right to approve any forest management activity on the property. A second primary constraint is access to steep slopes across the property. Additional constraints include a number of interfering species and the desire to not use any herbicide treatments, which can be remediated by using mechanical means to control these plants. However, utilizing mechanical means alone may not provide sufficient control of interfering species. The mix of species, and relatively low value of the timber species present poses a possible concern for obtaining logging contractors to do work without additional funding.

Permits

No permits are required in the Town of Rockland or Ulster County for any of the activities to be undertaken at the property. As previously mentioned, the Open Space Institute must approve any forest management activity prior to it undertaking place.

Stand Level Information

Stand 1

Stand 1 Objectives

Stand 1 hemlock hardwoods – small sawtimber **Acres** 22.3

Objectives: The primary objective is to initiate the conversion of the stand from a mostly even-aged to uneven-aged condition, with a preference for an increased component of hardwood species. Secondary objective is increase wildlife habitat, horizontal structural diversity, and increase the component of less shade tolerant species, such as black cherry, via a group selection approach.

Stand 1 Current Conditions

General description

This parcel is a very dense even-aged stand with complete crown closure and average to good quality timber. Due to high density, tree mortality is evident in overtopped and intermediate size classes. This stand has a component of yellow birch, black cherry and sugar maple, and should be managed with promoting this species mixture, while allowing hemlock to continue being a large component of the stand. Site index for red maple is 60, based on approximate age of 100 years and average dominant and co-dominant height of 90 ft. The elevation of the stand is 1680 to 1900 ft above sea level, and there is a steep to gentle slope from west to east across the stand. Generally, the tree form and timber quality is average to above average for most tree species.

The total basal area of the overstory and understory combined is 173.8 square feet per acre. For the overstory only, acceptable growing stock for timber (AGS) is 132.3 square feet per acre and the basal area of unacceptable growing stock for timber (UGS) is 41.5 square feet per acre.

The stand relative density is 98% of the average maximum stocking expected in undisturbed stands of similar size and species. This density is well above the range for best individual tree growth. At this relative density, growth rate of the biggest trees is probably moderate, while growth rate of the medium and smaller-sized trees is probably poor and mortality due to crowding high.

Timber volume is a good estimate of the productivity of forested sites. The boardfoot volumes were calculated using the 'Scrivani-Wiant' equation with the 'Doyle' log rule. Total timber volume on this 22.3 acres stand is approximately 32,478 cubic feet of sawtimber plus 35,627 cubic feet of pulpwood for a total

of 68,105 cubic feet. The net boardfoot volume averages 9,139.7 board feet per acre. The net pulpwood volume averages 1,597.6 cubic feet per acre. The net cubic volume averages 3,054.0 cubic feet per acre.

Timber value is an estimate of the total dollar value of the trees where they are standing, before they are cut and transported to market, based on the New York State Department of Environmental Conservation Stumpage Report for Summer 2017. The median prices for average price range were used with Grade 2 logs. These figures include all live trees of acceptable and unacceptable growing stock. The total value of the stand is estimated at \$11,250.84.

Composition

| | All species | eastern hemlock | red maple | yellow birch | sweet birch | sugar maple | American beech | Other species |
|--|-------------|-----------------|-----------|--------------|-------------|-------------|----------------|---------------|
| Basal area (sq.ft./ac.) | 173.8 | 74.6 | 44.6 | 20.0 | 16.2 | 8.5 | 6.2 | 3.8 |
| Percent of stand basal area (%) | 100.0 | 42.9 | 25.7 | 11.5 | 9.3 | 4.9 | 3.5 | 2.2 |
| Stems/area (stems/ac.) | 308.0 | 184.0 | 46.5 | 30.0 | 19.1 | 11.2 | 15.1 | 2.1 |

Diameters

| | All species | eastern hemlock | white pine | red maple | Norway spruce | red pine | yellow birch |
|---|-------------|-----------------|------------|-----------|---------------|----------|--------------|
| Medial DBH (in.) | 16.1 | 16.7 | 20.0 | 12.6 | 10.5 | 13.7 | 13.0 |
| Merchantable Medial DBH (in.) | 16.8 | 17.7 | 20.0 | 13.1 | 13.0 | 13.7 | 13.0 |
| Quadratic Mean DBH (in.) | 9.8 | 8.9 | 16.6 | 9.5 | 5.2 | 13.5 | 11.6 |
| Merchantable Quadratic DBH (in.) | 12.9 | 13.7 | 16.6 | 10.8 | 8.7 | 13.5 | 11.6 |
| Mean DBH (in.) | 7.9 | 6.6 | 15.5 | 8.7 | 4.3 | 13.5 | 11.1 |

Relative Density

| | All species | eastern hemlock | red maple | yellow birch | sweet birch | sugar maple | American beech | Other species |
|--------------------------|-------------|-----------------|-----------|--------------|-------------|-------------|----------------|---------------|
| Relative density (%/ac.) | 97.5 | 33.0 | 25.3 | 16.3 | 9.6 | 6.8 | 5.1 | 1.5 |
| Percent of stand (%) | 100.0 | 33.9 | 25.9 | 16.7 | 9.8 | 6.9 | 5.3 | 1.5 |

Timber volume

| | All species | eastern hemlock | red maple | yellow birch | sweet birch | sugar maple | American beech | Other species |
|---------------------------------|-------------|-----------------|-----------|--------------|-------------|-------------|----------------|---------------|
| Gross sawtimber volume (bd.ft.) | 203,816 | 86,940 | 61,019 | 14,034 | 14,647 | 11,964 | 6,304 | 8,908 |
| Net sawtimber volume (bd.ft.) | 203,816 | 86,940 | 61,019 | 14,034 | 14,647 | 11,964 | 6,304 | 8,908 |
| Gross pulpwood volume (cu.ft.) | 44,534 | 15,451 | 13,167 | 6,354 | 4,928 | 2,293 | 1,463 | 876 |
| Net pulpwood volume (cu.ft.) | 35,627 | 12,361 | 10,534 | 5,083 | 3,943 | 1,835 | 1,170 | 701 |
| Gross total volume (cu.ft.) | 85,131 | 31,248 | 25,997 | 9,827 | 8,341 | 4,541 | 2,701 | 2,475 |
| Net total volume (cu.ft.) | 68,105 | 24,998 | 20,798 | 7,862 | 6,673 | 3,633 | 2,161 | 1,980 |

Timber value

| | All species | eastern hemlock | white pine | red maple | Norway spruce | red pine | yellow birch | Other species |
|---------------------|-------------|-----------------|------------|-----------|---------------|----------|--------------|---------------|
| Sawlog value (\$) | 8,575.78 | 2,016.77 | 1,532.74 | 2,835.75 | 72.50 | 101.98 | 111.42 | 2,399.01 |
| Pulpwood value (\$) | 771.06 | 219.78 | 196.84 | 240.67 | 27.66 | 20.74 | 18.95 | 10.87 |
| Timber value (\$) | 9,346.84 | 2,236.56 | 1,729.58 | 3,076.42 | 100.16 | 122.72 | 130.37 | 2,409.88 |

Current forest type and current age

Forest Type

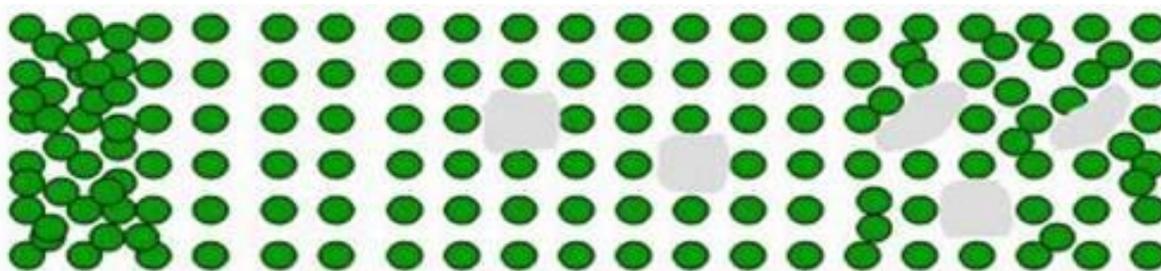
Age

Hemlock hardwoods _____

>150 _____

Bird's-eye view of current stand condition (check one)

- Wild stand Evenly spaced Evenly spaced with openings Variable density spaced with openings



Current spacing (in feet) Large (>9"DBH) 15 (ft) Pole (5-8"DBH) 30 (ft) Seedling (<5"DBH) 35 (ft)

Size and shape of openings none

Current structure:



- One canopy layer Two canopy layer Multi-layer/Unevenaged

Stand 1 Desired Future Stand Condition

Desired forest type and expected longevity

Forest Type

Age

Hemlock-hardwood

120 – uneven aged

Desired species to naturally regenerate sugar maple, black cherry, yellow birch, hemlock

Desired species to plant none

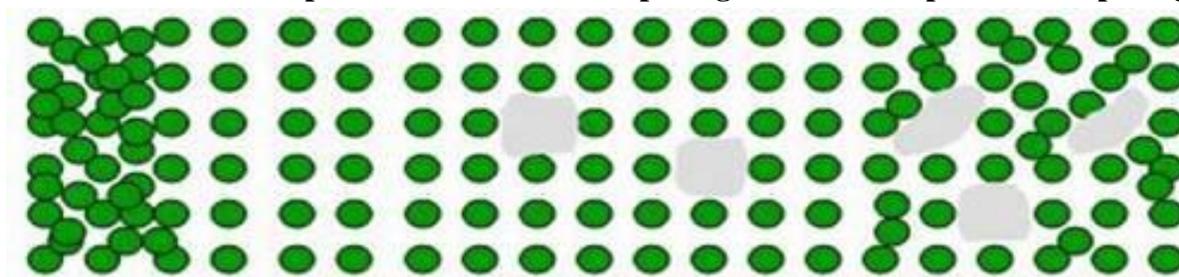
Bird's-eye view of desired future stand condition (check one)

Wild stand

Evenly spaced

Evenly spaced with openings

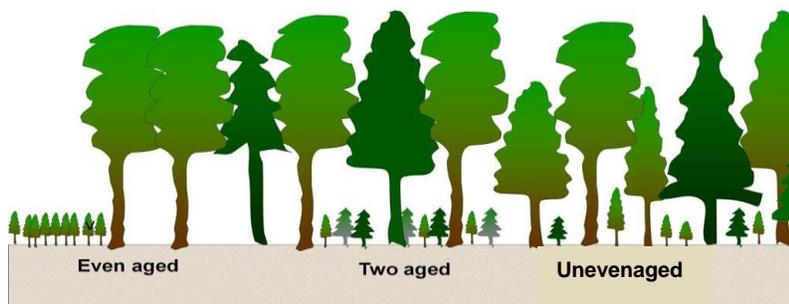
Variable density spaced with openings



Desired spacing (in feet) Large (>9"DBH) 15 (ft) Pole (5-8"DBH) 12 (ft) Seedling (<5"DBH) 8 (ft)

Size and shape of openings circular (0.1 – 0.25)

Desired structure:



One canopy layer Two canopy layer Multi-layer/Unevenaged

Other Desired Stand Descriptions: The preferred method of stand and tree development is via natural regeneration, which can be achieved with uneven-aged silvicultural system, specifically group selection. Currently, the stand is near or beyond maturity, with mortality among intermediate trees, so the

best approach would be to begin the implementation of a group selection system, with a full overstory removal in groups amounting to about 20% of the total stand area. In addition, the remaining stand should be thinned to 80% relative density, with retention of best form trees allowing for transition to an uneven aged forest management approach.

Stand 1 Forest Management Activities

Forest Health Management

There are no major forest health concerns with the exception of interfering species – there is a low amount of grass, fern, hophornbeam and diseased American beech in some sections of the stand. Additionally, HWA may be an issue in the future – increasing high quality stock of hemlock should promote some resistance. Some of the American beech show resistance to BBD and should be retained in thinnings.

Harvesting

This stand should have approximately 20% of area regenerated under a group selection approach, with opening diameter near single tree height (approximately 100 ft diameter gaps, between 0.1-0.25 acres, equivalent to 17 ¼ acre openings), which will allow sufficient sunlight to reach the forest floor to regenerate hemlocks and hardwoods. The groups should focus on removing overmature trees and UGS, including beech, hophornbeam and trees that are unlikely to make it for another 20 years. Additionally, no groups should be placed within approximately 100' of the road, due to possibility of slope failure. The residual stand should be marked to retain 80% relative density, above the B-line for hemlock hardwood stands with 20-49% hemlock component (Wisconsin DNR Silviculture and Forest Aesthetics Guide, Chapter 39), which is equivalent to a residual basal area of approximately 160 square feet per acre and 280 stems per acre. The best form trees should be retained, primarily in the dominant and co-dominant size classes, with intermediates retained as needed.

Slash management

Slash retention allows for recycling of nutrients contained in the wood, bark, leaves and needles back into the organic layer of the forest soils, and if left whole reduces the ability of deer to impact new seedlings. Due to landowner preference, wildlife concerns, and maximization of financial benefits, tops should remain on site and should not be lopped down with the exception of the areas visible from the road - approximately within 50 feet of the road. If it is not possible to remove all of the slash away from near the road, it shall be lopped down in place.

December 2017

Post harvest activities

Access trails will need to be regraded and recovered to their original or better condition, using geotextile/gravel and/or creating water bars as necessary. Additionally, scarification of the soil should occur across the small openings, this would allow for mechanical control of fern, graminoids and other interfering plants and promote soil mixing for hemlock regeneration. At the discretion of the landowner and availability of deer fencing, it can be placed around group cuts.

Best Management Practices

A very steep slope across this stand necessitates a need for water bars along trails post-harvest. In addition, any harvesting and mechanized work in this stand shall be done when soils are relatively dry during summer or early fall.

Monitoring

Continued monitoring for growth of interfering plant species and damaging insects/diseases should be undertaken at least every five years. Additionally, monitoring the regeneration areas and seedlings' ability to survive due to deer browse should be undertaken at the same time.

Suggested practices

In addition to thinning and group removals, there may be a need to treat woody residue near the road in order to prevent the likelihood of it falling into the road, as well as for aesthetic considerations. Access trails may need to be created, due to the difficulty accessing the parcel. After the work is completed, waterbars may need to be installed on any access trails.

| | | | | | |
|---|---------|-----|---|------|--|
| 1 | 2.4 ac | 384 | Woody residue Treatment – along road | 2020 | |
| 1 | 1450 ft | 655 | Forest Trails and landings | 2020 | |
| 1 | 10 ea | 587 | Structure for water control (Forestland waterbar) | 2020 | |

Management Activity Schedule and Tracking

| Stand | Unit (Acres/ Feet, etc) | NRCS Practice Code* | Treatment Activity Short Description (or reference to description in Plan) | Dates | | Assistance Program (s) Used? | Net Cash Flow (optional) | |
|-------|-------------------------------|---------------------------|---|---------|-----------|------------------------------------|-----------------------------|--------|
| | | | | Planned | Completed | | Cost | Income |
| 1 | 22.3 ac | 666 | Forest Stand improvement | 2020 | | | | |

Signatures and Approvals

Landowner

I have reviewed this plan and believe the management recommendations will help me meet my goals and objectives for my property. I agree to follow this plan to ensure the sustainability of my management.

Landowner

Date

Forest Stewardship Program

I certify that this Forest Management Plan meets the requirements of the federal Forest Stewardship Program.

Plan Author

Date

I certify that this Forest Management Plan meets the requirements of the federal Forest Stewardship Program.

State Forestry Representative

Date

Forest Stewardship Tracking Number: (if necessary) _____

NRCS Assistance Programs

I certify that this Forest Management Plan meets the requirements of the USDA Environmental Quality Incentives (EQIP) Program and/or the Quality Criteria for forest activity plans in Section III of the USDA NRCS Field Office Technical Guide.

Technical Service Provider

Number

Date

District Conservationist

Date

American Tree Farm Program

I certify that this Forest Management Plan meets the requirements of the American Forest Foundation's American Tree Farm System.

ATFS Inspecting Forester

Number

Date

Certified Tree Farm Number: (e.g. AL 1234) _____

Date of ATFS Certification: _____
