

FOREST STEWARDSHIP MANAGEMENT PLAN

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ALBEMARLE COUNTY, VIRGINIA

MARCH 3, 1994

## Introduction

The following report is a Forest Stewardship Management Plan for about 186 acres of land located off of Route 622 along the Hardware River in Albemarle County, Virginia. The land is shown as Tax Map 123, parcels 19A, 21, 23, and 23B in the county tax records. Access is gained to the property by traveling on Route 622 north for approximately 2 miles from the town of Scottsville. The access entrance is located approximately 4/5th of a mile from the point where Route 622 crosses the Hardware River. The property is located on the west side of Route 622.

The objective of this report is to present sound forest management recommendations to meet the objectives of the landowner.

The landowner's objectives are to provide for good overall forest management, with special emphasis on maintaining a scenic forest, enhancing wildlife habitat, and maintaining the property as a real estate investment.

## Stand Description and Management Recommendations

Of the 186 total acres, all the acres are forested. The 186 forested acres were divided into four individual stands, or forest areas of similar characteristics.

Figure 1 shows the location of the stands within the property. These stands are described below. Proposed management actions are shown in figure 2.

Acreages are estimates derived from aerial photographs, topographic maps and ground observations.

### Stand 1

Acres: 85

Forest Type: Upland hardwoods.

Species: The primary species are black oak (Quercus velutina), northern red oak (Quercus rubra), scarlet oak (Quercus coccinea), white oak (Quercus alba), and hickory (Carva). There are also scattered Virginia pine (Pinus virginiana) throughout the stand. Other species located within the stand and in the understory are shortleaf pine (Pinus echinata), and white pine (Pinus strobus).

Size: The oaks are small to medium size sawtimber, while the pines are pulpwood size.

Quality: Poor to fair.

Stocking: Adequate.

Soil Type: The dominate soil types located within this stand are Nason silt loam on 2 to 7 percent slopes, and 7 to 15 percent slopes. Most areas with these soil types are in woodland and some of the acreage is farmed. These soils are well suited to cultivated crops and to pasture and hay crops. Potential productivity for trees on these soils is moderately high. Seeds and seedlings survive and grow well if competing vegetation is controlled. Loblolly pine (Pinus taeda), Virginia pine, yellow-poplar (Liriodendron tulipifera), and oaks do well.

A third soil type which is present in this stand is Manteo channery silt loam on 7 to 15 percent slopes. This soil is not suited for cultivated crops. Potential productivity for trees on this soil is moderate. The soil is managed mostly for loblolly and shortleaf pine.

Topography: Flat to gently rolling.

Wildlife

Habitat:

The landowner has expressed a specific interest in deer (Odocoileus virginianus) and turkey (Meleagris gallopavo), and this stand is ideal habitat. The oaks and hickory will produce mast (nuts) which are utilized by both animal species. Some locations of this stand have good regeneration which provide cover and concealment.

Observations: The northwest portion of this stand adjacent to Route 622 appears to have been harvested in the past. There are a number of old road beds present as well as cut stumps. It also appears that this stand has a past history of fire. There are a number of individual trees which have but scars caused by fire.

The timber harvest conducted in the past may have actually been a "high grade" (removing the best trees and leaving the rest). The residual large trees are of poor quality and relatively limby or defective.

Some portions of this stand has good natural regeneration, while others have poor regeneration. The area of this stand closest to Route 622 has the worst regeneration.

Growth data was calculated for this stand, and the annual percentage growth averages about 2%. This can be categorized as being fair to poor.

Recommendations: It is my recommendation that the landowner cut firewood from this stand. In order to meet the objectives of the landowner to maintain a scenic forest and to maintain the real estate value, cutting some of the larger trees as firewood would lessen the visual impact of removing trees.

By cutting these large trees as firewood, the forest floor would be opened up to allow for regeneration to occur. It would also decrease the competition faced by the smaller trees.

The bottom line is that the large trees in this stand are growing extremely slow. Add this to the fact that they are poorly formed, this timber is not going to increase in value noticeably.

This action should increase the health of the forest over the long term, and at the same time maintain the scenic value of the stand.

## Stand 2

Acres: 71

Forest type: Pine.

Species: This stand consists primarily of Virginia pine with occasional shortleaf pine scattered throughout the stand. There are also occasional oaks and red maples (Acer rubrum) within the stand.

Size: The Virginia pine range from pulpwood to medium size sawtimber. The same holds true for the occasional shortleaf pine.

Quality: Fair to good.

Stocking: Adequate to over-stocked.

Growth Rate: Poor.

Soil Type: The soils present in this stand are the same as those present in stand 1. They are Nason silt loam on 2 to 7 percent slopes, and 7 to 15 percent slopes, and Manteo channery silt loam on 7 to 15 percent slopes.

Topography: Gently rolling.

Wildlife Habitat: This stand provides thermal cover for the local wildlife population. It is utilized by many wildlife species during the cold periods due to the fact that warmer air is trapped by the pine trees.

This stand will also provide seed as a food source to a number of residential bird species, as well as roosting sites for turkey.

Observations: The pine trees located in this stand are at there biological maturity. They are highly susceptible to disease and wind throw. During my examination of this stand, three southern pine beetle (Dendroctonus frontalis) (SPB) spots were found. This is not surprising as Albemarle County is currently in the midst of one of the worst southern pine beetle outbreaks in history, and this stand is an ideal candidate for infestation.

I also found an area (about 1 acre in size) which consisted of many down pine trees. It appears that they were damaged by wind, or by the recent ice storm that occurred this winter.

Recommendations: This stand presents quite a quagmire to this forester. It is my recommendation that this stand be clearcut, burned, and then re-planted with genetically improved loblolly pine. Obviously, this course of action does not coincide with the

landowners objective of maintaining a scenic forest and maintaining the real estate value of the land. From a forestry perspective, this recommended course of action is the appropriate management tool.

It is my opinion that it is just a matter of time before the remaining pine trees become infested with southern pine beetle. The question that the landowner needs to answer is "what is scenically more appealing, a stand of dead pine trees or a loblolly pine plantation?". Obviously, the visual impact of clearcutting this stand will be tremendous. But this is short term. The visual impact of a stand of dead pine is also high, but for over a longer period of time.

Leaving a buffer of un-cut trees along the road is an option, but one that I do not recommend. Because Virginia pine is a relatively shallow rooted tree, the prospect of wind throw would be high.

Once the timber harvest is complete, the newly made haul and skid roads should be planted with legumes, clover, and/or alfalfa. This will assist in the prevention of erosion, and will also provide a food source for deer and turkey. The same holds true concerning the fire lines that will be made. These should be maintained in order to allow for easy access in the case of fire. These areas may also need to be fertilized in order to assist with the establishment of these plants.

### Stand 3

Acres: 28

Forest type: Bottomland hardwoods

Species: This stand is dominated by yellow-poplar and red maple.

Size: Small sawtimber

Quality: Fair

Stocking: Adequate

Soil Type: The two dominant soil types of this stand are Manteo channery silt loam on 15 to 25 percent slopes, and Toccoa fine sandy loam.

The Manteo channery silt loam is a moderately steep, shallow, somewhat excessively drained soil on side slopes. Permeability is moderately rapid, and available water capacity is very low. The hazard of erosion is severe. This soil is not suited to cultivated crops, and is poorly suited to pasture and hay crops. Potential productivity for trees on this soil is moderate.

The Toccoa fine sandy loam is a deep, nearly level, well drained soil found on flood plains. The potential productivity for trees on this soil is very high.

Topography: Moderately steep to flat.

Wildlife Habitat: Bottomland hardwoods provide excellent quality wildlife habitat. In most cases, without a great deal of work.

Probably the most important aspect of this area is its contribution to water quality of the nearby Mechunk Creek. Water temperature is vital to aquatic life, and many of these trees provide shade which helps control water temperature, oxygen levels, and other physical, chemical, and biological characteristics of the water environment.

Recommendations: Leave this stand as is.

#### Stand 4

Acres: 2

Forest type: Beech

Species: This stand consists of large beech (Fagus grandifolia) trees.

Size: Large sawtimber size

Quality: Fair to poor

Soil Type: The dominant soil type in this stand is Wehadkee silt loam. This soil is deep, nearly level, and poorly drained. This soil is poorly suited to cultivated crops, and moderately well suited to pasture and hay crops. The potential productivity for trees on this soil is very high. The seasonal high water table and occasional flooding are the main limitations of this soil for nonfarm uses.

Topography: Moderately steep

Observation: This stand is very unique to the property. It consists of very large american beech with a thick mountain laurel understory. This stand is visually appealing and should be used for that purpose.

Recommendations: Leave this stand as is.

#### Stand 5

Acres: Less than 1

Forest type: Grown up field (Old Home Site)

Species: Scattered black locust (Robinia pseudoacacia) along with Virginia pine

Topography: Flat

Observations: This area is an old home site. There are no remaining wooden structures, but there is a large stone chimney which is still standing.

Wildlife Habitat: Because this stand consists primarily of a few trees and thick shrubs, it is outstanding wildlife habitat. Unfortunately, it is not large enough to support a large population or a wide variety of species.

Recommendations: The owners may want to consider if this stand has historical significance, and should contact The Division of Natural Heritage if they would like to pursue this matter.




## Conclusion

Due to the wide variety of forest cover types, and the owners desire to practice sound forest management, maintaining a scenic forest, enhancing wildlife habitat, and maintaining real estate value viable objectives for this land.

Stands 3, 4, and 5 are currently at a state where they meet the landowners objectives, and will continue to do so for the foreseeable future.

Stand 1 also meets the landowners objectives, but the potential exists to develop a healthier forest and still maintain it's visual appeal and real estate value. The recommendations for this stand do not require immediate action, but should be considered by the land owner.

Stand 2 of this property demands the landowners immediate attention. The southern pine beetle infestation will probably move very quickly through this stand. To be able to feasible conduct a timber harvest of this stand, it needs to be done soon. It is the opinion of this forester, that if the recommendations suggested in this report are acted upon, this stand will eventually meet the objectives of the land owner. If the recommendations are not acted upon, the land owners objectives can not be achieved.



Raymond A. Lamberton  
Forester/Wildlife Biologist

Suggested Schedule of Management Activities

W: Winter, S: Spring, U: Summer, F: Fall.

FIP: Forestry Incentives Program

SIP: Stewardship Incentives Program

| Time    | Practice  | Cost Share |
|---------|---|------------|
| S94-S99 | Cut large poorly formed trees in Stand 1 as firewood.       |            |
| U94     | Clearcut Stand 2  |            |
| F94     | Site prep (burn) Stand 2                                    | SIP        |
| F94     | Plant skid trails, landing yards, and fire lines in Stand 2 | SIP        |
| S95     | Plant loblolly pine in Stand 2                              | SIP        |
| U97     | Chemical release of Stand 2 if necessary                    | SIP        |

NOTE: Some recommendations do not specify species to plant as borders and food plots. The following are list of recommended plant species and the corresponding wildlife that should benefit:

Shrub borders: VA-70 lespedeza, Amquail lespedeza, Bicolor lespedeza, Honeysuckle, Dogwood, Crabapple, Autumn olive, Chokecherry, Blackhaw viburnum.

White-tailed deer: Alfalfa, Clover, Corn, Millet, Acorns.









Wild turkey: Acorns, Legumes, Winter wheat, Clover.

Quail: Legumes, Clover, Lespedeza, Bobwhite soybean, Partridge pea, Millet.

Ruffed grouse: Clover, Lespedeza, Orchard grass, Dogwood, Viburnum, Wild grape, Hawthorns.

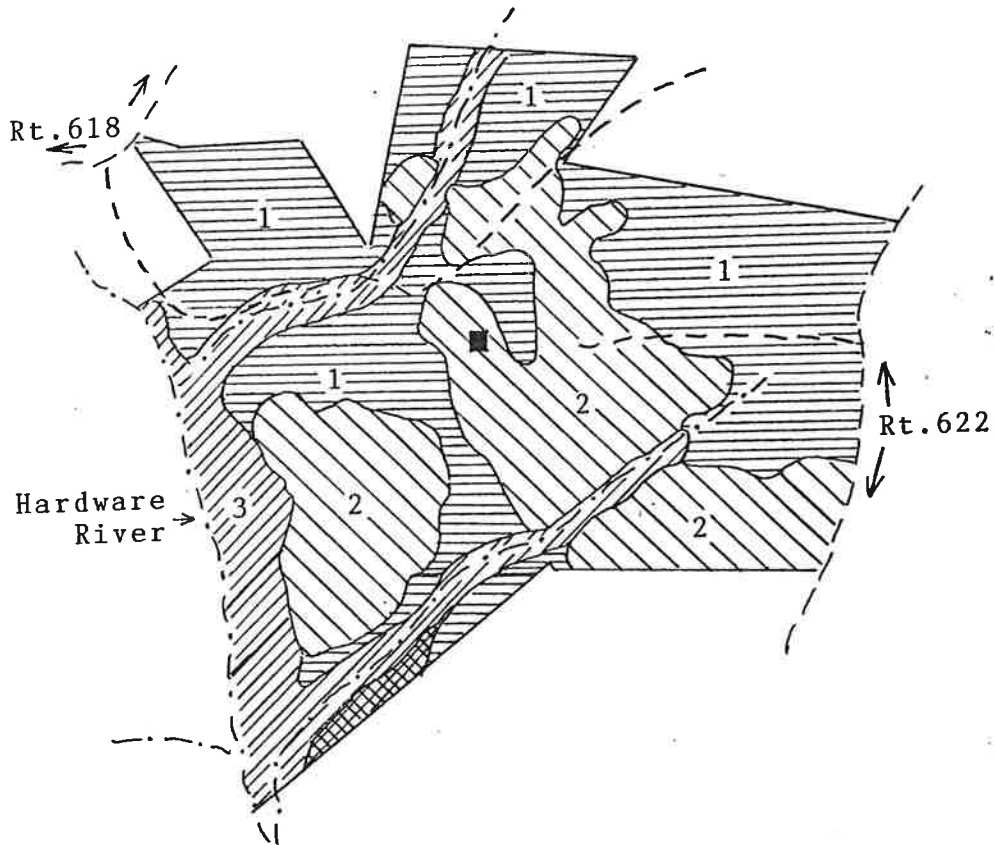
These are only a few of the recommended species for wildlife enhancement. Also recommended is the planting of mixtures in order to provide a variety of food sources. More information can be obtained from your consulting wildlife biologist and the Department of Game and Inland Fisheries.

FOREST STEWARDSHIP MANAGEMENT PLAN  
STAND MAP

- |   |  |
|---|--|
|  = Stand 1 |  = Property/stand boundary |
|  = Stand 2 |  = Road/Trail              |
|  = Stand 3 |  = Stream                  |
|  = Stand 4 |  = Stand 5                 |











SCALE: 1" = approx. 1,000'






# FOREST STEWARDSHIP MANAGEMENT PLAN

## PROPOSED MANAGEMENT ACTIONS

- |   |           |  |                           |
|---|-----------|--|---------------------------|
|  | = Stand 1 |  | = Property/stand boundary |
|  | = Stand 2 |  | = Road/Trail              |
|  | = Stand 3 |  | = Stream                  |
|  | = Stand 4 |  | = Stand 5                 |

SCALE: 1" = approx. 1,000'

- |   |  |
|---|--|
|  | = Cut firewood (1)                                       |
|  | = Clearcut, burn, & re-plant in loblolly pine (2)        |
|  | = Plant w/wildlife beneficial grasses, legumes, etc. (3) |

