



Vision • Commitment • Pride

FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For:
Jefferson County Schools

Prepared By:
J. Ted Ratcliff
Miss. Forestry Comm.

Time Period Covered by This Plan:
2012 - 2021

Date Plan Prepared:
2012-01-04

Plan Type:
Stewardship / Stewardship

This plan was developed in accordance with the rules of the Stewardship program.

Property Name: 18-9N-1E

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LANDOWNER INFORMATION

Organization: Jefferson County Schools
Name: Jefferson County Schools
Mailing Address: P.O. Box 157
City, State, Zip: Fayette, MS 39069
Country: United States of America
Contact Numbers: Home Number:
Office Number: 601-786-3791
Fax Number:
E-mail Address:
Social Security Number (optional): 640000000

FORESTER INFORMATION

Name: J. Ted Ratcliff, Service Forester
Forester Number: 00717
Organization: Miss. Forestry Comm.
Street Address: P. O. Box 452
City, State, Zip: Meadville, MS 39653
Contact Numbers: Office Number: 601-754-9111
Fax Number: 601-384-2437
E-mail Address: tratcliff@mfc.state.ms.us

PROPERTY LOCATION

County: Jefferson Total Acres: 840 Latitude: -91.09 Longitude: 31.77
Section: 18 Township: 9N Range: 1E

INTRODUCTION

This Forest Stewardship Management Plan will serve as a guide for accomplishing the goals and objectives for your property. In addition to addressing your specific goals and objectives, this plan includes recommendations for maintaining soil and water quality and protecting your forest from insects, disease, and wildfire. Recommendations are based on observation and assessment of the site.

OBJECTIVES

Timber Production

The goal is to produce high quality sawtimber. This will be accomplished through reforestation and timber stand improvement practices such as herbicide applications, prescribed burning, thinning at specified intervals, and other silvicultural practices. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

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Wildlife Management - General

The goal is to provide a diversity of habitats suitable for a variety of game and non-game wildlife species. Habitat management will focus on developing a variety of food, cover, water, and space. This will be accomplished by establishing and maintaining access roads and firelanes, providing openings within the forest, and the management of trees located within the Streamside Management Zone

PROPERTY DESCRIPTION

General Property Information

This section is located about 2 miles west of Highway 61 on Poplar Hill Road which runs through the southern portion of the section. In 2004 a massive tornado struck the section destroying the timber in stratas 6 and 7. The stands affected were the best red oak stands on School Trust Lands in the County. Approximately 825 acres of this section are forested, of the 840 total acres.

Water Resources

No perennial water resources were identified during a reconnaissance of the property. However, intermittent streams and drains identified will be managed in accordance with Mississippi's Best Management Practices.

Timber Production

The goal is to maximize the production of high quality timber. This will be accomplished through the application of timely thinning and other silvicultural practices designed to enhance timber quality and growth. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

Threatened and Endangered Species

No threatened and endangered species were identified during the reconnaissance and evaluation of your property.

Interaction with Surrounding Property

Prescribed practices should be carried out in a manner that will minimize adverse impacts on surrounding properties. Consideration should be given to potential air, water, visual, and other impacts. In addition, practices carried out should have positive effects on the surrounding community such as improved wildlife habitat and soil stabilization.

Soils General

Soils were evaluated on the property to determine the suitability of the site for the proposed activities. Forest practices were planned so as to minimize erosion or other adverse effects on the soil. The following soils are identified for this property: Morganfield and Memphis.

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Archeological or Cultural Resources

These areas can range from churches, old cemeteries, or Indian mounds to old home sites or other areas of historical significance.

Archeological or Cultural Resources Were Identified

A cemetery and church exist in the stand 3 as indicated on the attachment map. Also, a grave marker exist in the eastern portion of stand 8 as indicated on the attachment map. This site has been buffered and designated with blue paint on the trees around site. No forest management activities will occur inside this protected area.

GENERAL PROPERTY RECOMMENDATIONS

Forest Protection

A healthy vigorously growing stand is the best defense to an attack from a variety of forest insects, plants and pathogens.

Insects and Diseases

Trees are subject to attack from insects and diseases. Different insects and diseases affect trees according to the age, species, and condition of the trees. Planted stands of pines and pure stands of hardwoods are particularly susceptible to attack. Since there are many different insects and diseases, no attempt will be made here to explain all of them.

The property should be inspected at least annually for possible signs of insect and disease activity. Some things to look for are:

- Unseasonable leaf fall
- Discoloration of leaves or needles
- Pitch pockets on pine trees
- Heavy defoliation of hardwood leaves
- Groups of three or more dying trees within a stand

This list does not cover all instances of insect or disease attacks. If anything unusual is noticed, report it to a forester. In most cases, insect and disease problems can be controlled if discovered early.

Fire Protection

Your forest should be protected from wildfire at all times. The best way to protect your investment is by establishing and maintaining firebreaks around the property. Guidelines for establishment and maintenance of firebreaks may be found in Mississippi Forestry Commission publication #107, *Mississippi's Best Management Practices*.

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Grazing

Tree seedlings should be protected from grazing until such time as the terminal bud of the sapling is beyond reach of livestock. Domestic livestock should be denied access to the tree planting area.

Boundary Lines

It is the responsibility of the landowner to ensure that all property lines and boundaries designating areas to receive forestry work are clearly identified and visible to all contractors.

Note: Some forest practices may cause temporary adverse environmental or aesthetic impacts. These practices will only cause short-term adverse impacts where they are installed. Special efforts will be made to minimize adverse effects when carrying out any of the practices. Examples include: site preparation, planting, prescribed fires, firebreak installation and maintenance, road installation and maintenance, pesticide applications and timber harvesting.

Water Quality Protection

The objective of the landowner is to protect, preserve and enhance all water sources on or transecting the property. This can best be achieved by implementation of Best Management Practices in all aspects of the management of the property.

Aesthetics

The goal is to assure that the property is managed in such a way that is aesthetically pleasing to the landowner as well as the community. Activities could include, maintaining buffer strips along the road and adjacent to the home site, planting wildflowers along the road, and trees with attractive fall and spring color along the drive and near the home site.

Ecological Restoration

Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. A reconnaissance of the property has been conducted and no ecological restoration activities are recommended at this time.

Wildlife Mgt. Target Species

The objective of this practice is to provide habitat best suited for the featured or target species. Habitat management will focus on providing food, cover, water, and space to facilitate the target species.

Environmental Education

Environmental educational goals are to provide educational opportunities for children and adults through the development of items such as nature trails with tree identification markers, wildlife viewing areas, picnic areas, parking, public restroom facilities.

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Wildlife Management General

The goal is to provide a diversity of habitats suited for a variety of game and non-game wildlife species. Habitat management will focus on providing a variety of food, cover, water, and space. This will be accomplished, in part, by establishing and maintaining access roads and firelanes, providing openings within the forest, and leaving mast producing and den trees.

Timber Management

Timber management goals for this property are to manage timber resources in such a manner as to maximize timber production throughout the life of the stand.

Recreation

According to landowner objectives the recreational use of the property could prove to be an avenue for personal enjoyment or for generating income. An evaluation of your property should be conducted and a plan developed to accomplish your specific goals for recreational activities on your property.

SOIL TYPES

Morganfield

Morganfield soils are found on this section. Slopes are 0 to 2 percent. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 42 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Memphis

Memphis soils are found on this section. Slopes are 17 to 40 percent. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. The Natchez component makes up 23 percent of the map unit. Slopes are 15 to 50 percent. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is

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about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

STANDS

STRATA 1 (Stand 8)

Stand Description

This area consist of approximately 143 acres of mixed hardwood sawtimber. There were some large mature pine saw timber scattered throughout the stand. All pine timber was removed in 2011 to reduce stand mortality before final harvest. Some of this area is steep, making it difficult for harvesting operations.

Stand Recommendations

This stand will be managed as a mixed stand, upon final harvest it will be converted to loblolly pine on the ridges and upper slopes. The lower slopes and bottoms will be managed for red oak and other hardwoods.

STRATA 2 (Stand 14)

Stand Description

This stand consist of approximately 85 acres of pine plantation that was planted in 1996 following a harvest. This stand is well stocked and in good growing condition.

Stand Recommendations

This stand will be managed to grow to a 35 to 40 year rotation. At maturity it will be regenerated back into Loblolly Pine.

Activity Recommendations

Harvest

This stand should be ready to be thinned in 2014. This will be a first thin, pay as cut sale. The row integrity is not good so corridors will have to be cut by the logger. Corridors will be no wider than 20 feet. The distance between corridors will be no less than 30 feet.

Crop trees shall be left uncut and evenly distributed over the sale area at an average stocking rate of 70 square feet basal area. Areas where basal areas are below 70 square feet shall not be thinned.

Fire Protection

A prescribed fire is recommended in 2014 and 2020 for this site in order to reduce fuel loading and the potential for a wildfire to occur. A prescribed burning plan must be developed and followed in the application of the burn. Because of equipment,

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personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A certified prescribed burning manager should be employed to conduct the burn. The Mississippi Forestry Commission and other certified prescribed burning vendors are available to conduct prescribed burning.

Harvest

A 2nd thin in 2021 is recommended taking into consideration the growth of the stand and the local market. The stand should be thinned back to a 70-80 basal area. Only pulpwood size, lower quality form, overcrowded and suppressed, or diseased stems should be removed.

STRATA 3 (Stand 10)

Stand Description

This area consisted of approximately 106 acres of a mixed stand of hardwood sawtimber that was regeneration harvested in 2012. Some of this area is steep, making it difficult for harvesting operations.

Stand Recommendations

This stand is currently in the 2011-2012 harvest cut plan. It is being clear cut and will need to be site prepared with an aerial application of herbicides, site prep. burned and hand planted with loblolly pine seedlings. Planted pine stands that are established in site prepared cutovers are generally ready for a 1st thin at approximately age 15. Subsequent thins should be done on 6 to 8 year intervals until the the stand approaches rotation age which is estimated to approximately age 35, at which time the stand could be clearcut and reforested.

After the 1st thinning it is recommended that some form of understory control be practiced. This can be done with herbicides or with fire. If fire is the preferred method, the control burns should be done every 3 to 5 years. Herbicides will control understory vegetation for longer periods of time than fire and can therefore be used at less frequent intervals than fire . Without understory control one can expect the understory vegetation to take away water and nutrients from the pine stand and degrade the quality of the wildlife habitat.

Activity Recommendations

Site Preparation

The area will be site prepared with an aerial broadcast herbicide application. Chemicals and rates will be determined based on the vegetation present at that time by a licensed applicator.

This site will need a site preparation burn. The objective of the burn will be to remove the accumulation of debris on the site, which will improve planting conditions for the

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tree planting personnel. The burn should be done by a certified burner or the landowner using a burn plan and a permit to burn.

Regeneration

This area will be planted with genetically improved, containerized loblolly seedlings. Spacing will be done on an 8 foot by 10 foot spacing, yielding 544 seedlings per acre.

STRATA 4 (Stands 11 and 13)

Stand Description

This area consist of approximately 15 acres of a mixed stand of hardwood and pine sawtimber.

Stand Recommendations

This stand will be managed as a mixed stand, upon final harvest it will be converted to Loblolly pine.

Activity Recommendations

Harvest

This stand is planned to be harvested with a clear cut in 2016, in conjunction with the sale in strata 6. This area will probably have to be 100% tally because of the small scattered stands it consist of.

Site Preparation

The area will be site prepared in 2018 following harvest, with an aerial broadcast herbicide application. Chemicals and rates will be determined based on the vegetation present at that time by a licensed applicator.

This site will need a site preparation burn. The objective of the burn will be to remove the accumulation of debris on the site, which will improve planting conditions for the tree planting personnel. The burn should be done by a certified burner or the landowner using a burn plan and a permit to burn.

Regeneration

This area will be planted with genetically improved, containerized loblolly seedlings. Spacing will be done on an 8 foot by 10 foot spacing, yielding 544 seedlings per acre.

STRATA 5 (Stands 1 and 6)

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Stand Description

This stand consist of approximately 237 acres of mixed hardwood and pine regeneration. This area was hand planted with loblolly pine in 2006 and allowed to naturally regenerate to hardwood. There was a large amount of cherrybark and water oak regeneration in 2005 after the timber was salvaged following a tornado in 2004.

Stand Recommendations

This stand will be managed as a mixed stand, with harvest leaning to a natural hardwood regeneration.

Activity Recommendations

Harvest

This operation will be a harvester select 1st thinning in 2021. Corridors will be cut to allow access due to poor row integrity of a maximum width of 20 feet at a minimum of 30 feet apart. The remaining trees should be thinned to a basal area of approximately 70 square feet and should exhibit potential of future sawtimber quality. Only pulpwood size, lower quality form, overcrowded and suppressed, or diseased stems should be removed.

STRATA 6 (Stand 5)

Stand Description

This stand consist of a approximately 95 acre two-age hardwood stand. The stand was cut back to a seed tree in 1990. The hardwood regeneration has been slow to develop.

Stand Recommendations

This stand will be managed as a hardwood stand, with harvest leaning to a natural regeneration.

Activity Recommendations

Harvest

In 2016 the large mature hardwood and pines will be harvested on this strata. This should release the advanced regeneration of hardwood. Some undesirable species of hardwood pulpwood will also be cut to promote natural regeneration.

STRATA 7 (Stands 7 and 12)

Stand Description

This stand consist of approximately 39 acres of naturally regenerated hardwood. This area was allowed to grow back naturally in 2005 after the timber was salvaged following a tornado in 2004.

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Stand Recommendations

This stand will be managed as a hardwood stand, with harvest leaning to a natural regeneration.

Activity Recommendations

Harvest

This operation will be a harvester select 1st thinning in 2021. Corridors will be cut to allow access due to poor row integrity of a maximum width of 20 feet at a minimum of 30 feet apart. The remaining trees should be thinned to a basal area of approximately 70 square feet and should exhibit potential of future sawtimber quality. Only pulpwood size, lower quality form, overcrowded and suppressed, or diseased stems should be removed.

STRATA 8 (Stand 2)

Stand Description

Consist of approximately 97 acres of pine pulpwood that was planted in 1995. Stand development is behind because of a large amount of hardwood encroachment in the understory and main canopy. Some areas have been completely encroached by hardwood saplings and pulpwood.

Stand Recommendations

This stand will be managed to grow to a 35 to 40 year rotation. At maturity it will be regenerated back into Loblolly Pine.

Activity Recommendations

Harvest

This stand should be ready to be thinned in 2013. This will be a first thin, pay as cut sale. The row integrity is not good so corridors will have to be cut by the logger. Corridors will be no wider than 20 feet. The distance between corridors will be no less than 30 feet.

Crop trees shall be left uncut and evenly distributed over the sale area at an average stocking rate of 70 square feet basal area. Areas where basal areas are below 70 square feet shall not be thinned.

Harvest

A 2nd thin is planned in 2020 taking into consideration the growth of the stand and the local market. The stand should be thinned back to a 70-80 basal area. Only pulpwood size, lower quality form, overcrowded and suppressed, or diseased stems should be removed.

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STRATA 16 (Stand 4)

Stand Description

This stand consist of approximately 8 acres in a Streamside Management Zone. Timber is predominately hardwood ranging from sawtimber size to premerchantable. The basal area is approximately 60 square feet.

Strata Recommendations

Since this strata will be managed as a permanent SMZ, only selective cutting will occur in these areas. Selective cutting will occur as adjoining sales are performed. The harvesting will focus on removing the mature timber and will not remove more than 50 percent of the existing stand.

DISCLAIMER

This management plan will be used as a guideline for School Trust Lands forest management work for the next 10 years. It must be understood though, that this plan must be flexible and might have to be modified due to fluctuations in market conditions, insect infestations, wild fires, storm damage, and other circcumstances.

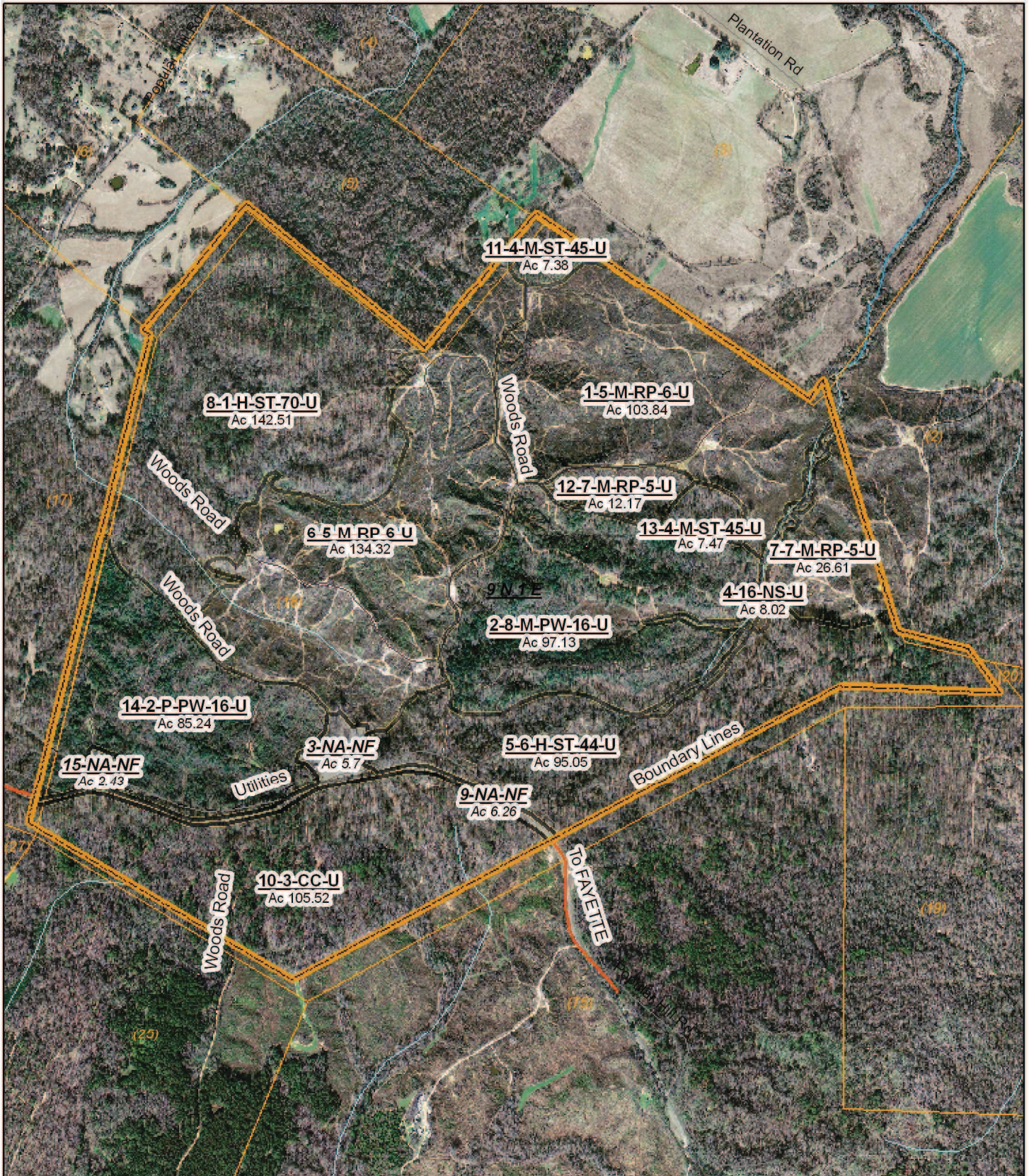


JEFFERSON COUNTY SCHOOLS

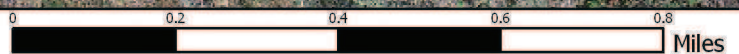
POPLAR HILL S18-T9N-R1E

2012 to 2021

839.65 Acres



(12/27/2011)



LEGEND



Property

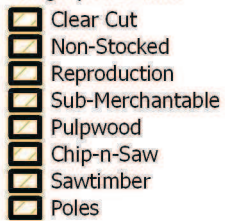


Property

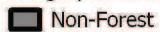
Category 1: Stands



Category 2: Stands

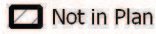


Category 3: Non-Forest Stands



Non-Forest

Category 4: Not in Plan Stands



Not in Plan

Category 5: Features Only Plan Stand



Features Only Plan

Property Roads/Trails



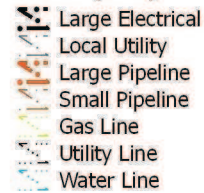
Boundary Lines



Boundary Lines (cont)



Utilities (Lines)



Stand Activity Schedule for
Jefferson County Schools
18 9N 1E

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2013					
3	10	Regeneration, Artificial, Plant, Hand, Loblolly	106	\$11,660.00	\$0.00
3	10	Site Preparation, Chemical, Broadcast, Aerial, Combination	106	\$10,600.00	\$0.00
3	10	Site Preparation, Other, Burn, Hand, Cut-Over	106	\$3,180.00	\$0.00
8	2	Harvest, Mechanical, Thin, Machine, Loblolly	97	\$1,942.60	\$34,858.01
Yearly Totals			415	\$27,382.60	\$34,858.01
2014					
2	14	Harvest, Mechanical, Thin, Machine, Loblolly	85	\$1,700.00	\$34,646.00
Yearly Totals			85	\$1,700.00	\$34,646.00
2015					
2	14	Fire Protection, Other, Burn, Hand, Fuel Reduction	85	\$2,550.00	\$0.00
Yearly Totals			85	\$2,550.00	\$0.00
2016					
4	11	Harvest, Mechanical, Regeneration, Machine, Loblolly	7	\$295.20	\$8,243.61
4	13	Harvest, Mechanical, Regeneration, Machine, Loblolly	7	\$298.80	\$8,344.14
6	5	Harvest, Mechanical, Thin, Machine, Loblolly	95	\$4,277.25	\$85,207.57
Yearly Totals			110	\$4,871.25	\$101,795.32
2018					
4	11	Site Preparation, Other, Burn, Hand, Cut-Over	7	\$210.00	\$0.00
4	11	Site Preparation, Chemical, Broadcast, Aerial, Combination	7	\$770.00	\$0.00
4	11	Regeneration, Artificial, Plant, Hand, Loblolly	7	\$770.00	\$0.00
4	13	Regeneration, Artificial, Plant, Hand, Loblolly	7	\$770.00	\$0.00

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue	
4	13	Site Preparation, Chemical, Broadcast, Aerial, Combination	7	\$770.00	\$0.00	
4	13	Site Preparation, Other, Burn, Hand, Combination	7	\$210.00	\$0.00	
			Yearly Totals	42	\$3,500.00	\$0.00
2020						
2	14	Fire Protection, Other, Burn, Hand, Hazard Mitigation	85	\$2,550.00	\$0.00	
8	2	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	97	\$3,395.00	\$53,725.39	
			Yearly Totals	182	\$5,945.00	\$53,725.39
2021						
2	14	Harvest, Mechanical, Thin, Machine, Loblolly	85	\$2,975.00	\$47,549.85	
5	1	Harvest, Mechanical, 1st Thin, Machine, Loblolly	104	\$3,640.00	\$29,999.84	
5	6	Harvest, Mechanical, Thin, Machine, Loblolly	134	\$4,690.00	\$39,200.36	
7	7	Harvest, Mechanical, 1st Thin, Machine, Loblolly	27	\$945.00	\$8,000.10	
7	12	Harvest, Mechanical, 1st Thin, Machine, Loblolly	12	\$420.00	\$3,600.00	
			Yearly Totals	362	\$12,670.00	\$128,350.15
			Grand Totals	1.281	\$58,618.85	\$353,374.87