

FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For: Smith County Board of Education

> Prepared By: Jared R. Bynum MFC

Time Period Covered by This Plan: 2012 - 2021

Date Plan Prepared: 2012-02-15

Plan Type: Stewardship / Stewardship

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

Property Name: S16_T1N_R7E

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LANDOWNER INFORMATION

Name: Smith County Board of Education

Mailing Address: P.O. Box 308

212 Sylvarena Ave.

City, State, Zip: Raleigh, MS 39153 Country: United States of America

Contact Numbers: Home Number:

Office Number: 601-782-4296

Fax Number:

E-mail Address: robert.miles@smithcountyschools.net

Social Security Number (optional): 646001078

FORESTER INFORMATION

Name: Jared R. Bynum, Service Forester

Forester Number: 01726 Organization: MFC

Street Address: P.O. Box 182

505 Magnolia Drive

City, State, Zip: Raleigh, MS 39153

Contact Numbers: Office Number: 601-782-9471

Fax Number: 601-782-4386

E-mail Address: jbynum@mfc.state.ms.us

PROPERTY LOCATION

County: Smith Total Acres: 627 Latitude: -89.59 Longitude: 31.92

Section: 16 Township: 1N Range: 7E

DISCLAIMER

This information was derived from a small sampling of the forest resources. It reflects a statistical estimation that is only intended to be accurate enough for the purposes of making decisions for the short-term management of these resources. These estimations are temporarily static. Events and circumstances may occur within the survey area that will physically alter the forest resources and therefore will not be reflected in this plan.

INTRODUCTION

This Forest Stewardship Management Plan is a vital part of the Mississippi Forestry Commission's efforts in implementing the best forest management program possible on sixteenth section school trust lands in Smith County, Mississippi. This plan will serve as a guide for accomplishing the goals and objectives for this section. In addition to addressing 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 primary objective of placing sixteenth section lands under a forest management program is to produce as much revenue as possible for the Smith County School District. The primary goal is to produce a desirable high quality sawtimber product. These efforts will be directed by regulating the forest resource 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.

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 consists of one full section of land (627 acres) and is located in the southwestern portion of Smith County, being more specifically located three and one-half miles northwest of Mize, Mississippi. There are no public roads or residences located on this section. Oakohay Creek flows through the middle of the section, and Hatchapaloo Creek also flows through the section along the south west corner. The section is almost entirely flat, and is located in the flood plain of Oakohay Creek. There are a couple of areas with some elevation change, and pines are located on these areas, or could be replanted in pine if/when harvested. The entire section is timbered, except for approximately 15 acres that has/had been under water from past beaver activity, areas which have been taken in with oil wells, etc. Access to this section is a major hurdle. The section has no access to the stands west of Oakohay Creek. The only stands which have access are on the east side of Oakohay, and even those could be problematic because access goes through a sizeable oil field on private land, and the road is locked except to oil personnel, and the landowner(s). Access could probably be obtained, but would require a considerable undertaking to get permission to use the roads across private land. The areas west of Oakohay have had access in the past, and harvesting operations have been undertaken in the past, but the access, so far, has been limited only to the adjoining landowner, who is a timber buyer, and has been the one who has performed the past harvesting operations. Without a permanent access, the school is limited to only obtain bids from this buyer, as no one else has been given permission to cross, and the landowner has most of the section landlocked.

For the purposes of this plan, 557 acres of the 612 acres of forested land are considered inoperable, and cannot be managed under this plan, until such time as a permanent access

is pursued by the Smith County Board of Education. As mentioned above, even the 55 acres that can be managed also has some minor access concerns.

History

This section has had a long history of abuse in the form of illegal timber cutting. In the more recent past, this illegal cutting has stopped. Boundary lines were established in 2000. Improvements have been made in the form of a hardwood shelterwood cut, and a hardwood regeneration cut. Access roads were improved at the time of the cutting, and replanting practices. This general area was the location of the old "Cohay Camp" which was operated by Eastman, Gardiner Company in the 1920's, which is where the bulk of the abuse took place.

Recreation and Wildlife

Hunting is the primary form of recreation taking place on this section. Some fishing may be taking place, and has taken place in the past along Oakohay Creek. The game species most often hunted are deer and turkey. Brood habitat diversity is present to support large numbers of these and other game species. Any timber management practice to be implemented should consider the recreational and wildlife management aspects as much as is feasible. As mentioned in the general description, because of the lack of access, only the adjoining landowner, his hunting lessee, or members of his family have access to this section, which severly limits the revenue potential from the hunting lease on this property.

Problems

The primary problem with this section is the lack of access in the past, both east and west of Oakohay Creek. The only access as of today, is limited access on the east side of Oakohay Creek.

Water Resources

Oakohay Creek and Hatchapaloo Creek were identified as perennial water resources identified during a reconnaissance of the property. These and other 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.

Archeological or Cultural Resources

An old cemetary, according to the current survey, exists along the east line of the section in the northeast 1/4, in stand 12, near the new oil well site, which is stand 8 on the attached map. When the section was surveyed, the perimeter of this area was clearly marked with ribbon, and iron fence posts to protect it. The Mississippi Forestry Commission has never found any markings, stones, or any other indication to believe that this area is actually a cemetary, because it is in a flooded area, that is covered in water about 1/2 the year or more. However, since it is identified as a cemetary, it will be maintained as one, and no forest management activities will occur inside of 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. Furthermore, forest roads and permanent firebreaks will be utilized, where accessible, to help protect the site from destructive wildfires.

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.

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. Grazing should not be a problem on this section due to the lack of any open fields in the immediate vicinity to the section. This section also does not have any leased parcels other than the hunting lease on the entire section.

Boundary Lines

It is the responsibility of the landowner to ensure that all property lines and boundaries are established. The Mississippi Forestry Commission will maintain these established boundary lines and will ensure that 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 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. Streamside Management Zones (SMZ) will be utilized where needed to help to protect and preserve these resources.

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. This section is remote in nature, so this is of little concern.

Ecological Restoration

Ecological restoration is the process of assisting the recovery of an ecosystem that has be 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.

If better access were obtained for this section, an outdoor classroom would be a great addition to the Smith County School District, due to the vast diversity of hardwood timber on this property.

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.

Prescribed burning is highly recommended for wildlife habitat management where loblolly, shortleaf, longleaf, or slash pine is the primary overstory species. Periodic fire tends to favor understory species that require a more open habitat. Deer, dove, quail and turkey are game species which benefit from prescribed fire. Yield and quality of herbage, legumes, and browse from hardwood sprouts are increased after a prescribed burn. Prescribed burning creates openings for feeding, travel, and dusting.

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

The continued recreational use of this section by leasing the hunting and fishing rights will continue to be of benefit to the school system. If a better access was obtained, the sky would be the limit on the revenue possible from the hunting lease on this section because of the hardwood overstory that is present. At the present time, only the local people who own or lease the adjoining lands have the opportunity to hunt this property.

SOIL TYPES

Trebloc

The Trebloc component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on terraces. The parent material consists of silty alluvium deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is moderate. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 9 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. Loblolly Site Index = 95.

Kirkville

The Kirkville component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. Loblolly Site Index = 95.

Smithdale

The Smithdale component makes up 90 percent of the map unit. Slopes are 8 to 35 percent. This component is on hillslopes. The parent material consists of loamy fluviomarine deposits. 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 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 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. Loblolly Site Index = 86. Longleaf Site Index = 69. Slash Site Index = 85.

Savannah

The Savannah component makes up 90 percent of the map unit. Slopes are 2 to 5 percent. This component is on coastal plains. The parent material consists of loamy alluvium deposits. Depth to a root restrictive layer, fragipan, is 16 to 38 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during January, February, March. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria. Loblolly Site Index = 88. Longleaf Site Index = 78. Slash Site Index = 88.

Jena

The Jena component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on natural levees. The parent material consists of loamy alluvium. 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 moderate. Shrink-swell potential is low. This soil is occasionally 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 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. Loblolly Site Index = 100.

Stough

The Stough component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on terraces. The parent material consists of loamy alluvium. Depth to a

root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 15 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. Loblolly Site Index = 90. Slash Site Index = 86.

STRATA

Strata 2

Strata Description

Strata 2 contains stand 2 and is 171 acres of submerchantable hardwood timber, which was artificially regenerated in 2002, making the stand 9 years old. Because of the lack of access, as mentioned in the general property description, this area is classified as inoperable.

Strata Recommendations

No management activities should be required on this strata during the planning period covered by this plan, other than monitoring for beaver activity, if access were to be obtained, so monitoring could occur.

For the purposes of this plan, and assuming that we do obtain access to manage this site, this stand will be managed on a 70 year rotation.

Strata 3

Strata Description

Strata 3 is made up of stand 9 and is a 21 acre mixed species submerchantable stand about 6 or 7 years old. This stand was harvested several years ago, and natural regeneration was attempted on this site, which was only partially successful. Access has been of a concern, and is still uncertain as of the date of the writing of this plan, as access is across a private landowner, but the road is controlled by an oil company, and is behind a locked gate. Any access along this road would require coordination with the oil company, but should be no problem.

Strata Recommendations

For now, this stand will be monitored only until such time as strata 6, also on the east side of Oakohay, is regenerated in FY 2018. At that time, a decision will be made as to the success of the natural regeneration of the site, and if needed, the site will be site prepared and regenerated along with strata 6.

If regenerated, the new stand would be managed on a 35 to 40 year rotation. During this time frame, management activities such as thinnings, mid-rotation release, and prescribed burning to improve wildlife habitat would be used to keep stand at full production.

Strata 5

Strata Description

Strata 5 contains stands 7 and 11 and contains approximately 66 acres. Stand 7 is a pine pulpwood/chip-n-saw stand about 20 years old, and stand 11 is a mature pine sawtimber stand, which is primarily pine, with hardwood in the lower places and along the drains. The stands in this strata are listed as inoperable, as discussed in the general property description. A sale was attempted in this strata 2 or 3 times, to thin stand 7, but the neighboring landowner(s) refused to allow timber buyers access, so the contracts were never executed.

Strata Recommendations

The stands in this strata need to be harvested, to make way for a new pine forest on this higher elevated portion of this section, but is unable to be done at this time due to the lack of access. No management is recommended until access is obtained.

If regenerated, the new stands would be managed on a 35 to 40 year rotation. During this time frame, management activities such as thinnings, mid-rotation release, and prescribed burning to improve wildlife habitat would be used to keep stands at full production.

Strata 6

Strata Description

Stands 10 and 12 make up this 34 acre mature, primarily hardwood sawtimber area, and is located on the east side of Oakohay Creek. As mentioned in the general property description, this strata and strata 3 are the only areas that are listed as operable, and access is still of a concern.

Strata Recommendations

For managment purposes, a sale is recommended on the stands in this strata, where feasible, in about FY 2018. The area would be sheared and raked, and planted with loblolly pine where the terrain would allow. The remaining areas would either be naturally regenerated with hardwood, or bedded, and also planted in loblolly pine, or left out of any sale entirely. As mentioned in the archeological and cultural resources section, the old cemetary is supposedly located in this strata, so care will be taken to avoid it.

Any new regeneration on the site would be hardwood, and would be managed on a 70 year rotation.

Activity Recommendations

Regeneration Harvest

During FY 2018, the stands in this strata will be harvested to prepare for a new forest to be planted. The total cut acreage may be less than the total acreage in the strata because of low or ponded areas, or SMZ's.

Site Preparation

After the site has been harvested, the area will be mechanically site prepared by shearing and raking to prepare the site to be planted.

Regeneration

After harvesting and site preparation activities are completed, the site will be hand planted with 2nd generation south loblolly pine seedlings at a rate of 691 per acre.

Strata 7

Strata Description

Strata 7 contains the bulk of the mature hardwood timberland on this section, and contains 316 acres. This strata also includes the acreage taken in by Oakohay Creek and any Streamside Management Zones, and Hatchapaloo Creek, and all tributaries of these two creeks. This strata is also listed as inoperable.

Strata Recommendations

Because of the lack of any established access, no activities are planned for this strata. If access were to be obtained during this planning period, it is possible that some sort of sale could be conducted near the end of the planning period. Normally, a rotation age for a hardwood stand would be 70 years.

Strata 20

Strata Description

Strata 20 is made up of stand 3 and is a small hardwood boundary zone, or wildlife diversity zone which was left from the only timber sale on the west side of Oakohay Creek, about 10 years ago. The area was left primarily as a wildlife corridor across the property. Two of these zones were left in that sale, but Hurricane Katrina took one of them out.

Strata Recommendations

No activites are planned for this area, even if access were obtained. This area was left for a wildlife diversity zone, and all adjacent timber has been removed, so this stand would be managed with stand 2, which is strata 2. A rotation age would only be considered after reforestation, which would come when stand 2 was harvested.

OTHER PLAN ACTIVITIES

Boundary Lines

Line Description

This section has approximately 4 miles of boundary lines that are painted with "Orange" boundary line paint. The lines are maintained by periodically repainting the boundary. Because of the lack of access, boundary work on this section is quite hard, and requires tracking down the neighboring landowner and asking permission to cross his property to paint a boundary.

Activity Recommendations

Property Activities

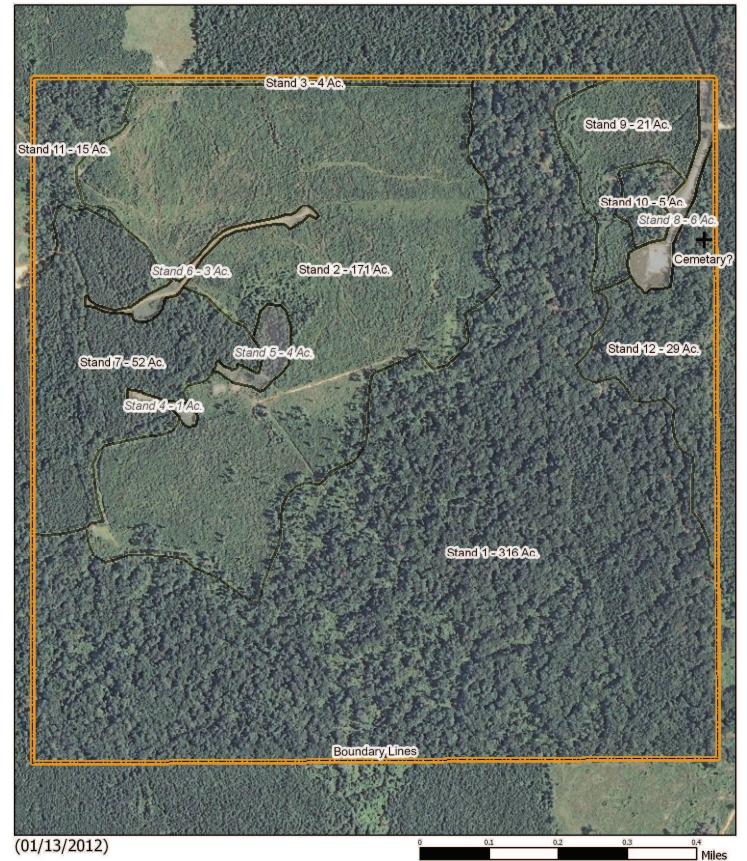
Routine inspections and general maintenance of the roads, firelanes, and boundary lines will ensure overall appearance and aesthetics of the property. The boundary lines on this section are scheduled to be repainted in 2015 and again in 2021.



Smith County Board of Education

Section 16, Township 1 North, Range 7 East Smith County, Mississippi 2012-2021 planning period (627 Acres)





Section 16, Township 1 North, Range 7 East



Property Property
Category 1: Stands Sawtimber Sub-Merchantable
Category 3: Non-Forest Stands Non-Forest
Restricted Sites + Cemetery
MFC Raceman

MIC Daselliap **County Boundary** County Boundary Quadrangle Grid USGS Quad **PLS Townships** PLS Townships Survey Districts District 2 Blockgroup (Census 2000) Blockgroup (Census 2000) Block (Census 2000) Block (Census 2000) Tract/BNA (Census 2000) ☐ Tract/BNA (Census 2000) School Sections School Sections





Stand Activity Summary for Smith County Board of Education 16 1N 7E

Filters Applied: County: Smith

Client Class: School Trust Land

District: South Central District
Client: Smith County Board of Ed

STR: 16 1N 7E

Activity:

Year: 2012 Through 2021

STR	Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue			
2018									
16 1N 7E	6	10	Harvest, Mechanical, Regeneration, Machine, Loblolly	5	\$175.00	\$11,440.00			
16 1N 7E	6	12	Harvest, Mechanical, Regeneration, Machine, Loblolly	29	\$1,015.00	\$66,352.00			
			Yearly Totals	34	\$1.190.00	\$77.792.00			
2021									
16 1N 7E	6	10	Regeneration, Artificial, Plant, Hand, Loblolly	5	\$647.50	\$0.00			
16 1N 7E	6	10	Site Preparation, Mechanical, Shear/Rake, Machine, Cut-Over	5	\$1,554.00	\$0.00			
16 1N 7E	6	12	Regeneration, Artificial, Plant, Hand, Loblolly	29	\$3,625.00	\$0.00			
16 1N 7E	6	12	Site Preparation, Mechanical, Shear/Rake, Machine, Cut-Over	29	\$8,700.00	\$0.00			
			Yearly Totals	68	\$14,526.50	\$0.00			
			Grand Totals	102	\$15,716.50	\$77,792.00			