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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_T2N_R7E

MISSISSIPPI FOREST STEWARDSHIP PROGRAM

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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	
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FORESTER INFORMATION

Name:	Jared R. Bynum , Service Forester	
Forester Number:	01726	
Organization:	MFC	
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	Fax Number:	601-782-4386
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PROPERTY LOCATION

County:	Smith	Total Acres:	643	Latitude:	-89.59	Longitude:	32.01
Section:	16	Township:	2N	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

The 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. Current leasing situations hinder the forestation of most of the acreage on this section. Forestry Best Management Practices will be implemented, where possible, 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 (643 acres) and is located in the west central portion of Smith County, being more specifically located three miles west of Raleigh, Mississippi. There are five public roads that pass through the section, and numerous residences. There are several small drainages with intermittent streams that cross the section but no major drainages exist. Most of the section is open land, containing 500 acres, that is leased, subleased, or at least occupied for farm, agricultural, residential, commercial, or some other use. Of the 143 acres of forested land on the section, 127 acres are classified as inoperable because of lessee situations, and is mostly in a semi-open condition, or is along fences, drains, or around houses and fields, making management of the resource nearly impossible without lessee opposition. Only 16 acres of the section is in a ready-to-manage state.

History

This section has a long history of abuse in the form of illegal timber cutting and land clearing. In the more recent past, most of this illegal cutting has stopped. A couple of illegal cutting violations have been reported to the Board of Education in recent years.

Recreation and Wildlife

There is not a great presence or potential for recreation and wildlife management on this section due to the leasing situation. A few quail, dove, and other birds, and possibly a few scattered deer or turkey will pass through on occasion.

Problems

Most of this section is leased, subleased, or at leased occupied by people in some way or another. Due to the timber theft in the past on this section, the resource has been fragmented and residences have dotted the landscape, making management of this section as a whole, impossible. A few small pockets of timber remain, some of which has been cut through in past years, but is manageable to a certain degree. Reforestation may not be an option on some of the acres that are forested because of the type of lease, or the lack of reforestation clauses in the lease documents. The only revenue this section provides to the school-aged children and the tax payers in Smith County is the little bit of revenue produced from surface leasing, and that is not much when compared to other school districts, or even other sections in Smith County for that matter. Wildfires are another concern. This section, by far, has the highest historical wildfire occurance of any of the school trust lands in Smith County.

Water Resources

Oakohay Creek touches the extreme south west edge of the section. This creek and any other intermittent streams and drains identified will be managed in accordance with Mississippi's Best Management Practices.

Timber Production

The goal would usually be to maximize the production of high quality timber. This would be accomplished through the application of timely thinning and other silvicultural practices designed to enhance timber quality and growth. Forestry Best Management Practices would also be implemented to prevent erosion and protect water quality in those situations. This section, for the most part, is non-forest.

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

Two churches are present on this section at the crossroad of Highway 540 and SCR 540-2. Both of these areas are in the non forested areas of Stand 3 on the attached map. No forest management activities are planned around these areas.

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, in forested areas, 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. Because most of this section is open field, grazing could be a concern if any of the acreage is ever forested, especially if cattle were to escape fencing.

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 designated 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 community. Activities could include, maintaining buffer strips along any roads and adjacent to any home sites, and other activities, if the section leasing situation changes, and timber is ever planted on the property.

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 the board were to decide to do so.

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 any timber resources in such a manner as to maximize timber production throughout the life of the stand.

Recreation
As mentioned earlier, the only potential this section has for any recreational value, is by the people who have the individual parcels leased, or occupied.

SOIL TYPES

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 24 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 = 81.

Ora

The Ora component makes up 90 percent of the map unit. Slopes are 5 to 8 percent. This component is on uplands. The parent material consists of loamy fluviomarine deposits. Depth to a root restrictive layer, fragipan, is 18 to 42 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 low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. Loblolly Site Index = 83.

Mantachie

The Mantachie component makes up 10 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 somewhat 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 low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 15 inches during January, February, March, December. 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 = 98.

Kirkville

The Kirkville component makes up 10 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.

Jena
The Jena component makes up 10 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 frequently 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 5w. This soil does not meet hydric criteria. Generated brief soil descriptions are created for major soil components. The Urban land is a miscellaneous area.

Stough
The Stough component makes up 90 percent of the map unit. Slopes are 2 to 5 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 low. Shrink-swell potential is low. This soil is not 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 3e. This soil does not meet hydric criteria. Loblolly Site Index = 90. Slash Site Index = 86.

STRATA

Strata 1

Strata Description

Stand 5 makes up this strata and consists of a 16 acre mature mixed pine-hardwood stand. The stand is located adjacent to the crossroad of Highway 540 and SCR 540-2. The area may be leased, but has good access, and does not have any fences to contend with, making it the only manageable stand on the entire section.

Strata Recommendations

The timber on this strata was sold during the latter stages of FY 2011, but as of the date of this plan, has not been cut. Therefore, the timber classification on the management plan, and map, is sawtimber.

After regeneration of the area, the new stand will 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 will be used to keep the stand at full production.

Activity Recommendations

Regeneration

After harvesting and site preparation activites are completed, the site will be hand planted with 2nd generation south Mississippi containerized loblolly pine seedlings at

a rate of 605 per acre. Containerized planting is somewhat more expensive than traditional methods of planting, but has a higher normal survival rate, therefore fewer seedlings per acre are used. Containerized seedlings also can be planted earlier in the year.

Site Preparation

After harvesting operations are complete, and sufficient green up has taken place, the site will be chemically site prepared by aerial means, which will kill all living vegetation on the site to allow it to be burned prior to planting. Herbaceous chemicals will also be used in the tank mix to provide for herbaceous material control into next spring.

Strata 2

Strata Description

Stand 2 makes up this strata, and consists of 39 acres of mature, predominantly hardwood, sawtimber about 50 years old or older. The site is poorly drained, and is situated mostly in a wet bottom. This strata is listed as inoperable due to the current leasing situation and the nature of the soils.

Strata Recommendations

A portion of the timber in this strata, especially along the slopes and ridges should be harvested, and a new forest planted, however, because of the leasing situation, no management activities are considered on this stand. If the leasing situation were to change in the future, the site would be evaluated for a harvest.

If the area was to ever become operable, any new regenerated area along these ridges and slopes 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 the stand at full production. The lower areas would be maintained as an SMZ for soil and water protection.

Strata 7

Strata Description

Stands 1, 4, 7, and 8 make up this strata, which consists of a mostly semi-forested area, containing 64 acres. All of the acreage in this strata is considered to be under some sort of lease. Along the creek in the extreme south west edge of the section, some areas are forested a little heaver than in the other areas.

Strata Recommendations

As mentioned in strata 2, a sale needs to be made on the timber to make way for a new forest, because most of the area is in an understocked, poor condition. However because of the leasing situation, fences, yards, etc. the strata is listed as inoperable. If the leasing conditions change, or the board decided to tackle this project, the site would be

evaluated for a harvesting operation. The leases would need to be evaluated for reforestation clauses before the timber was sold.

If the area was to ever become operable, any new regenerated areas 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 the stands at full production. Any lower areas identified would be maintained as an SMZ for soil and water protection.

Strata 20

Strata Description

Stand 6 makes up this area, which consists of 24 acres of a low area between two adjacent fields, which is too wet to cultivate, allowing the area to grow into a semi-forested mature hardwood stand. The entire area is leased.

Strata Recommendations

As mentioned in Strata 2, and 7, there is a potential to remove some timber value from this area, but because of the leasing situation, no management activities are planned.

As mentioned earlier, If the area was to ever become operable, any new regenerated areas 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 the stand at full production. The lower areas would be maintained as an SMZ for soil and water protection.

OTHER PLAN ACTIVITIES

Boundary Lines

Line Description

This section has approximately 4 miles of boundary lines which were established in 2000, that are painted with "Orange" boundary line paint. The lines are maintained by periodically repainting the boundary.

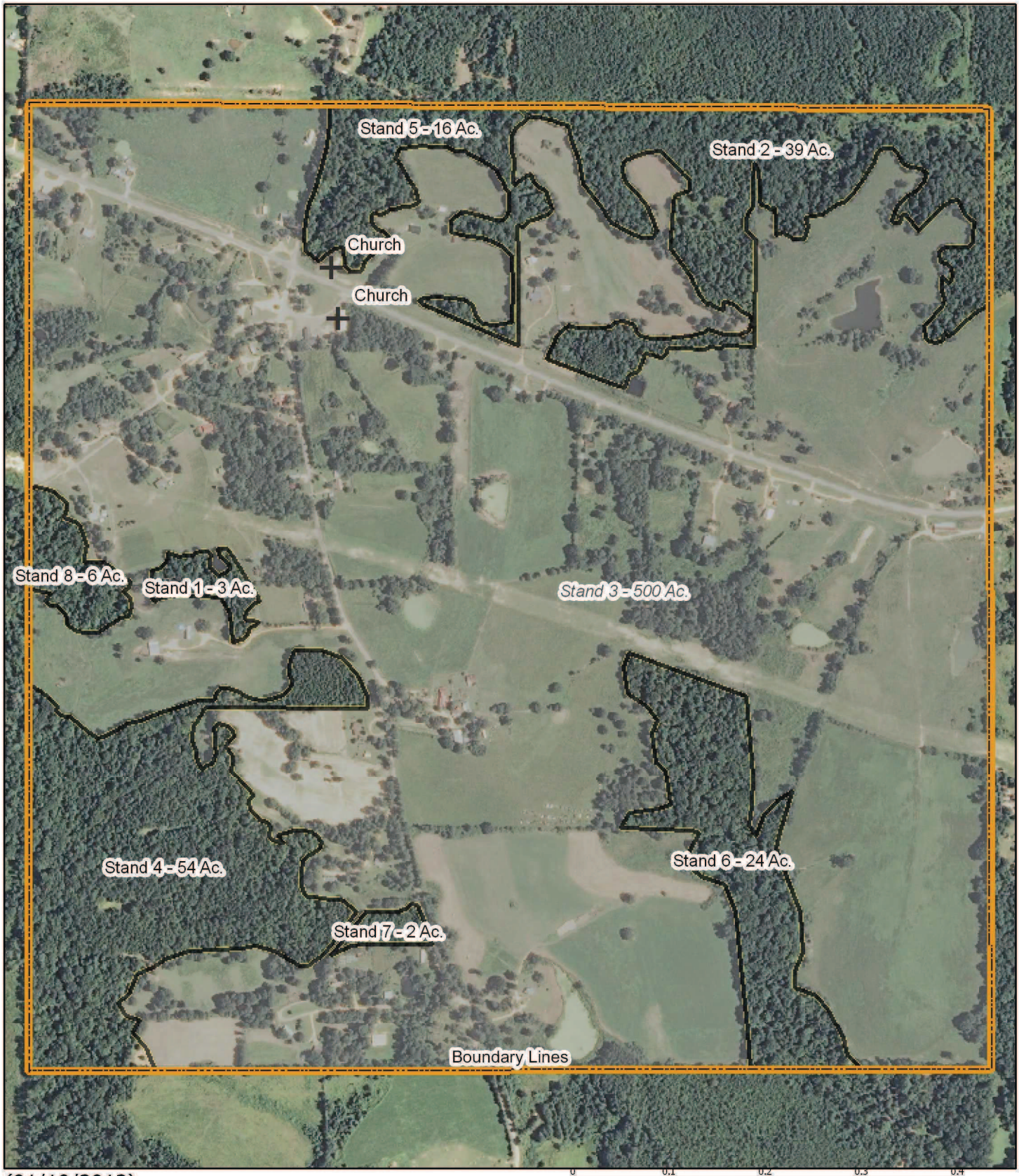
Activity Recommendations

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 are scheduled to be repainted on this section in 2014, and again in 2020.

Smith County Board of Education

Section 16, Township 2 North, Range 7 East
Smith County, Mississippi
2012-2021 planning period (643 Acres)



(01/10/2012)

0 0.1 0.2 0.3 0.4 Miles

Section 16, Township 2 North, Range 7 East

Property
Property

Category 1: Stands
Sawtimber
Non-Stocked

Category 3: Non-Forest Stands
Non-Forest

Restricted Sites
church

MFC Basemap

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)

County Roads
County Roads

3 Digit Highway
3 Digit Highway

Natural Gas Lines
Natural Gas Lines

School Sections
School Sections

Public School Districts
SMITH COUNTY SCHOOL DISTRICT

US Congressional District
US Cong Dist #3

MS Senate
34

MS House
79

Perennial Streams
Perennial Streams

Intermittent Streams
Intermittent Streams

Hydrologic Units (Basins)
UPPER LEAF RIVER

Historic Forest Boundary
Longleaf Pine with Loblolly Pine-Slash Pine

MS Forest Habitat
SOUTHERN LOAM HILLS-RUGGED TOPOGRAPHY

Physiographic Region
SOUTH CENTRAL HILLS

Soil Associations
savannah-ora-stough
mantachie-kirkville-jena

Surface Geology
CATAHOULA

MFC Districts
MFC Districts

MFC Dispatch Units
MFC Dispatch Units

MS Outline
MS Outline

Stand Activity Summary for
Smith County Board of Education
16 2N 7E

Filters Applied:
County: Smith
Client Class: School Trust Land
District: South Central District
Client: Smith County Board of Ed
STR: 16 2N 7E
Activity:
Year: 2012 Through 2021

STR	Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2013						
16 2N 7E	1	5	Site Preparation, Chemical, Broadcast, Aerial, Combination	16	$1,600.00	$0.00
16 2N 7E	1	5	Regeneration, Artificial, Plant, Hand, Loblolly	16	$2,000.00	$0.00
			Yearly Totals	32	$3,600.00	$0.00
			Grand Totals	**32**	**$3,600.00**	**$0.00**