Vision • Commitment • Pride

FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For:
Grenada County BOE

Prepared By:
Kenneth E. Cline
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-T22N-R7E

MISSISSIPPI FOREST STEWARDSHIP PROGRAM

TABLE OF CONTENTS

LANDOWNER INFORMATION

Name:	Grenada County BOE	
Mailing Address:	Grenada School District	
	P.O. Box 1940	
City, State, Zip:	Grenada, MS 38902	
Country:	United States of America	
Contact Numbers:	Home Number:	
	Office Number:	662-226-1606
	Fax Number:	662-226-7994
E-mail Address:	ddaigneault@gsd.k12.ms.us	
Social Security Number (optional):		

FORESTER INFORMATION

Name:	Kenneth E. Cline , SF	
Forester Number:	01333	
Organization:	MFC	
Street Address:	50 E. Pecan St.	
	Suite-A	
City, State, Zip:	Grenada, MS 38901	
Contact Numbers:	Office Number:	662-226-1973
	Fax Number:	662-226-1973
E-mail Address:	kcline@mfc.state.ms.us	

PROPERTY LOCATION

County:	Grenada	Total Acres:	649	Latitude:	-89.57	Longitude:	33.77
Section:	16	Township:	22N	Range:	7E		

DISCLAIMER

Stewardship Plan 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 temporally 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 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.

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 approximately 4 miles East of Gore Springs, North of Hwy. 8 in Grenada County and consist of 649.07 acres, of which 640.02 acres are forested. The section consists of the following stands:

STRATUM #1: **Pine Sub. Merch.-**15 yr. old (233.38 ac.), estab. 1996. **Stand** # 13.

STRATUM #2: **Pine Sub. Merch**.-13 yr. old (115.97 ac.), estab. 1998. **Stand** # 4, 5, 8, 15, 17, & 19.

STRATUM #3: **Cut-over-**New (104.93 ac.), estab. FY '12. **Stand** # 20 .

STRATUM #4: **Hardwood Sawtimber-**67 yr. old (66.24 ac.), estab. 1944. **Stand** # 12.

STRATUM #5: **Pine Sawtimber-**51 yr. old (52.93 ac.), estab. 1960. **Stand** # 18.

STRATUM #6: **Hardwood Sawtimber SMZ-**61 yr. old (36.74 ac.), estab. 1950. **Stand** # 2, 6, 10, 14, 21.

STRATUM #7: **Pine Sawtimber**-23 yr. old (29.83 ac.), estab. 1988. **Stand** # 3.

The section will be inspected annually, to assess the overall condition of the stands, roads, and firelanes. Any and all maintenance to the section will be done as needed.

Water Resources

Perennial water resources were identified during a reconnaissance of the property. The watershed drainages of this section are in the Sabougla Creek watershed; a tributary of the Yazoo River Watershed Basin. The objective is to protect, preserve, and enhance all water sources and drainages on or transecting the property. Mississippi's Best Management

Practices will be implemented, during all aspects of the management of this property, to minimize the impact on any water source.

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 and Cultural Resources
No Archeological and Cultural Resources were identified during a reconnaissance of the property.

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:

SOIL TYPES

TbE, TbE2 - Tippah-Boswell complex
The Tippah component makes up 55 percent of the map unit. Slopes are 8 to 12 percent. This component is on uplands. The parent material consists of loess deposits. 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 low. Available water to a depth of 60 inches is high. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. The Boswell component makes up 40 percent of the map unit. Slopes are 12 to 17 percent. This component is on uplands. The parent material consists of clayey 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 moderate. Shrink-swell potential is moderate. 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 7e. This soil does not meet hydric criteria.

Loblolly Site Index = 85.

Gs, Gu, Gt - Gullied Land-clayey, silty, sandy
Generated brief soil descriptions are created for major soil components. The Gullied land is a miscellaneous area. Loblolly Site Index = 68.

W - Water
Generated brief soil descriptions are created for major soil components. The Water area is a miscellaneous area.

TbD2 - Tippah-Boswell complec, eroded
The Tippah component makes up 55 percent of the map unit. Slopes are 8 to 12 percent. This component is on uplands. The parent material consists of loess deposits. 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 low. Available water to a depth of 60 inches is high. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. The Boswell component makes up 40 percent of the map unit. Slopes are 8 to 12 percent. This component is on uplands. The parent material consists of clayey 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 moderate. Shrink-swell potential is moderate. 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 6e. This soil does not meet hydric criteria.

Loblolly Site Index = 85.

DuC3 - Dulac silt loam
The Dulac 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 loess deposits. Depth to a root restrictive layer, fragipan, is 20 to 26 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April, December. 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 = 75.

BtF - Boswell-Tippah complex
The Boswell component makes up 45 percent of the map unit. Slopes are 17 to 35 percent. This component is on uplands. The parent material consists of clayey 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 moderate. Shrink-swell potential is moderate. 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 7e. This soil does not meet hydric criteria. The Tippah component makes up 40 percent of the map unit. Slopes are 8 to 12 percent. This component is on uplands. The parent material consists of loess deposits. 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 low. Available water to a depth of 60 inches is high. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April, December. 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 = 85.

Fl, Ff - Falaya silt loam
The Falaya 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 silty 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 low. 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 18 inches during January, February, March, April, 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, Cherrybark Oak = 110.

RcF - Ruston-Cuthbert assoc.
The Ruston component makes up 45 percent of the map unit. Slopes are 17 to 45 percent. This component is on coastal plains. 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 7e. This soil does not meet hydric criteria. The Cuthbert component makes up 29 percent of the map unit. Slopes are 17 to 35 percent. This component is on uplands. The parent material consists of loamy marine 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 moderate. Shrink-swell potential is moderate. 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 7e. This soil does not meet hydric criteria.

Loblolly Pine Site Index = 80.

CrF - Cuthbert-Ruston assoc.
The Cuthbert component makes up 46 percent of the map unit. Slopes are 17 to 35 percent. This component is on uplands. The parent material consists of loamy marine 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 moderate. Shrink-swell potential is moderate. 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 7e. This soil does not meet hydric criteria. The Ruston component makes up 31 percent of the map unit. Slopes are 17 to 40 percent. This component is on coastal plains. 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 7e. This soil does not meet hydric criteria.

Loblolly Site Index = 80.

GENERAL PROPERTY RECOMMENDATIONS

Forest Protection
A vigorous 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.*

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 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.

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.

STRATA

Strata 1

Strata Description

Pine Sub-Merchantable-15 yr. old (233.38 ac.), estab. 1996. **Stand #13**.

Current stocking consists of 360 trees per acre, averaging 8 inches in diameter. The Basal Area is 126 square feet per acre.

Strata Recommendations

This Strata is scheduled for a *1st Thinning* in **2013** (stand age 17). The objective will be to reduce the Basal Area to 80 square feet per acre. Diseased, damaged and poorly formed trees will be targeted for removal. *Stand and market conditions will dictate the actual timing of the timber sale.*

Activity Recommendations

Harvest

A *1st Thinning* is scheduled for **2013**. Diseased, damaged, and poorly formed trees will be selected for removal, with the goal of reducing the average Basal Area to 80 square feet per acre. *Stand and market conditions will dictate the actual timing of the sale*.

Fire Protection

A prescribed fire is recommended 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, 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 (on a limited basis) and other certified prescribed burning vendors are available to conduct prescribed burning.

A Pres*cribed Burn* is scheduled in **2016** (two years after completion of the thinning). The purpose will be to remove logging slash and reduce the fuel load.

Wildlife Management

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.

A *Wildlife Habitat Improvement* prescribed burn is scheduled for **2019**.

Strata 2

Strata Description

Pine Sub-Merchantable-13 yr. old (115.97 ac.), estab. 1998. **Stand # 4, 5, 8, 15, 17, and 19**.

Current stocking consists of 374 trees per acre, averaging 8 inches in diameter. The Basal Area is 141 square feet per acre.

Strata Recommendations

This Strata is scheduled for a *1st Thinning* in **2015** (stand age 17). The objective will be to reduce the Basal Area to 80 square feet per acre. Two years after completion of the thinning, A *Prescribed Burn* is scheduled in **2018**. This will be a fuel reduction burn. A

second *Prescribed Burn* is scheduled in **2021**, with the objective of wildlife habitat improvement.

Activity Recommendations

Harvest

A 1st thinning is scheduled for **2015**. Diseased, damaged and poorly formed trees will be selected for removal, with the goal of reducing the average Basal Area to 80 square feet per acre. *Stand and market conditions will dictate the actual timing of the sale*.

Fire Protection

A prescribed fire is recommended 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, 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 (on a limited basis) and other certified prescribed burning vendors are available to conduct prescribed burning.

A Pres*cribed Burn* is scheduled in **2018** (two years after completion of the thinning). The purpose will be to remove logging slash and reduce the fuel load.

Wildlife Management

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.

A *Wildlife Habitat Improvement* prescribed burn is scheduled for **2021**.

Strata 3

Strata Description

Cutover-NEW (104.93 ac.), estab. FY 2012. **Stand # 20**.

This is a new cutover, established in *August 2011*. It will be allowed to sprout during the spring and early summer of *FY 2012*, in preperation for planned site prep and planting operation in **FY '13**.

Strata Recommendations

A *Chemical Site Prep* is planned for the summer of **FY 2013**. The chemical perscription will be based on the species that need to be controled. This will be determined by a site inspection, conducted after leaf out, in the spring. The chemical treatment will be followed by a *Site Pep Burn* during the fall of the same year.The Strata will then be planted, in Improved Loblolly Pine, during the winter of **FY 2013**.

Activity Recommendations

Site Preparation

A *Chemical Site Prep* spray will be scheduled, in FY **2013**, to control competing vegetation and improve the tract for tree planting. This work should be done between *July 15, 2012 and Sept. 30, 2012.*

Following the chemical work, a *Site Prep Burn* will be conducted, during the fall of FY **2013**, to further prepare the site for tree planting. Preferably, this work should be completed by the end of *November, 2012*.

Regeneration

This Strata is scheduled for *Tree Planting in* **2013**: The tract will be hand planted in Improved Loblolly Pine on a 7 ft. X 9 ft. spacing (691 trees per acre). The total number of seedlings needed will be 73,000. Planting will be scheduled for *January 1, 2013 - March 1, 2013*.

Strata 4

Strata Description

Hardwood Sawtimber-67 yr. old (66.24 ac.), estab. 1944. **Stand # 12**.

Current stocking consists of 127 trees per acre, with an average diameter of 14 inches and an a Basal Area of 138 square feet per acre. The estimated yield is 144 tons per acre. Species include a variety of oaks (both White and Red), hickorys, Red maple, Green ash, American elm, Sycamore and Persimmon. Pine are present but are of minor significance.

Strata Recommendations

This Strata is scheduled for a *Final Harvest* in **2014**. All merchantable timber will be harvested at this time. Upon completion of the harvest, *Chemical Site Prep, Site Prep Burn and Tree Planting* operations will be scheduled. These operations are planned for **2016**.

Activity Recommendations

Harvest

A *Final Harvest* is scheduled for **2014**. This will be a lump sum sale. All merchantable timber will be removed in this operation. *Stand and market conditions will dictate the actual timing of the sale*.

Site Preparation

A *Chemical Site Prep* spray will be scheduled, in FY **2016**, to control competing vegetation and improve the tract for tree planting. This work should be done between *July 15, 2015 and Sept. 30, 2015.*

Following the chemical work, a *Site Prep Burn* will be conducted, during the fall of FY **2016**, to further prepare the site for tree planting. Preferably, this work should be completed by the end of *November, 2015*.

Regeneration

Although this Strata was originally a hardwood stand, the soils of this Strata are beter suited to growing pine. Therefore, this Strata will be hand *Planted* in *Improved Loblolly Pine* during the winter of **2016**. The spacing will be 7 ft. X 9 ft. (691 trees per acre). The total number of seedlings needed will be 46,000. This work will be scheduled for *January 1, 2016-March 1, 2016*.

Strata 5

Strata Description

Pine Sawtimber-51 yr. old (52.93ac.), estab. 1960. **Stand # 18**.

Current stocking consists of 54 trees per acre, with and average diameter of 15 inches. The Basal Area is 65 square feet per acre and the estimated yield is 125 tons per acre. A minor hardwood component accounts for an additional 10 trees per acre, with a Basal Area of 14 square feet per acre. The estimated hardwood yield is 15 tons per acre.

Strata Recommendations

This Strata is scheduled for a *Final Harvest* in **2014**. All merchantable timber will be harvested at this time. Upon completion of the harvest, *Chemical Site Prep, Site Prep Burn and Tree Planting* operations will be scheduled. These operations are planned for **2016**.

Upon completion of the tree planting operation, this Strata will be combined with Strata 4 into a *single* strata.

Activity Recommendations

Harvest

A Final Harvest is scheduled in **2014**. All merchantable timber will be harvested at this time. *Stand and market condition will dicatate the actual timing of the sale.*

Site Preparation

Upon completion of the final harvest, a *Chemical Site Prep* spray will be scheduled, in FY **2016**, to control competing vegetation and improve the tract for tree planting. This work should be done between *July 15, 2015 and Sept. 30, 2015.*

Following the chemical work, a *Site Prep Burn* will be conducted, during the fall of FY **2016**, to further prepare the site for tree planting. Preferably, this work should be completed by the end of *November, 2015*.

Regeneration

This Strata is scheduled for *Tree Planting in* **2016**: The tract will be hand planted in Improved Loblolly Pine on a 7 ft. X 9 ft. spacing (691 trees per acre). The total number of seedlings needed will be 37,000. Planting will be scheduled for *January 1, 2016 - March 1, 2016*.

Strata 6

Strata Description

Hardwood Sawtimber-SMZ-61 yr. old (36.74 ac.), estab. 1950. **Stand # 2, 6, 10, 14, and 21**.

Current stocking consists of 80 trees per acre, with an average diameter of 14 inches. The Basal Area is 85 square feet pre acre. The estimated yield is 64 tons per acre. {This is a *Restricted Management Zone*.}

Strata Recommendations

This strata will be managed on an 80 year rotation with *selective* harvesting only. Selective harvesting will occur when adjacent stands are thinned or regenerated. No more than 50% of the crown cover will be removed, in order to maintain sufficient overstory to provide shade, maintain bank stability and protect water quality. [*The minimum width on all SMZ's will be 30 feet on both sides of the stream bank*.]

Natural regeneration will be utilized when needed.

No Activities are scheduled at this time.

Strata 7

Strata Description

Pine Sawtimbe-23 yr. old (29.83 ac.), estab. 1988. **Stand # 3**.

Current stocking consists of 120 trees per acre, with an average diameter of 11 inches. The Basal Area is 82 square feet per acre. The estimated yield is 78 tons per acre. A

minor hardwood component consists of 25 trees per acre, with a Basal Area of 10 square feet per acre and an estimated yield of 5 tons per acre.

Strata Recommendations

This Strata is scheduled for a *Thinning* in **2013** (stand age 25). The objective will be to reduce the Basal Area to 80 square feet per acre. Two years after completion of the thinning, A *Prescribed Burn* is scheduled in **2016**. This will be a fuel reduction burn. A second *Prescribed Burn* is scheduled in **2019**, with the objective of wildlife habitat improvement.

Activity Recommendations

Harvest

A *Thinning* is scheduled for **2013**. The goal will be to reduce the Basal Area to approximately 80 square feet per acre. The thinning will target any pulpwood sized trees, as well as, diseased, damaged and poorly formed trees, leaving a residual stand composed mainly of dominant and codominant sawtimber sized trees. *Stand and market conditions will dictate the actual timing of the sale.*

Fire Protection

A prescribed fire is recommended 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, 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 (on a limited basis) and other certified prescribed burning vendors are available to conduct prescribed burning.

A Pres*cribed Burn* is scheduled in **2016** (two years after completion of the thinning). The purpose will be to remove logging slash and reduce the fuel load.

Wildlife Management

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.

A *Wildlife Habitat Improvement* prescribed burn is scheduled for **2019**.

OTHER PLAN ACTIVITIES

Boundary Lines

Line Description

The Boundary Lines on this section were last painted in **September 2008**. They were marked with Blue paint.

Line Recommendations

Boundary Line Maintenance is scheduled for **2015** and **2020**. The boundary lines will be marked with *Orange* paint.

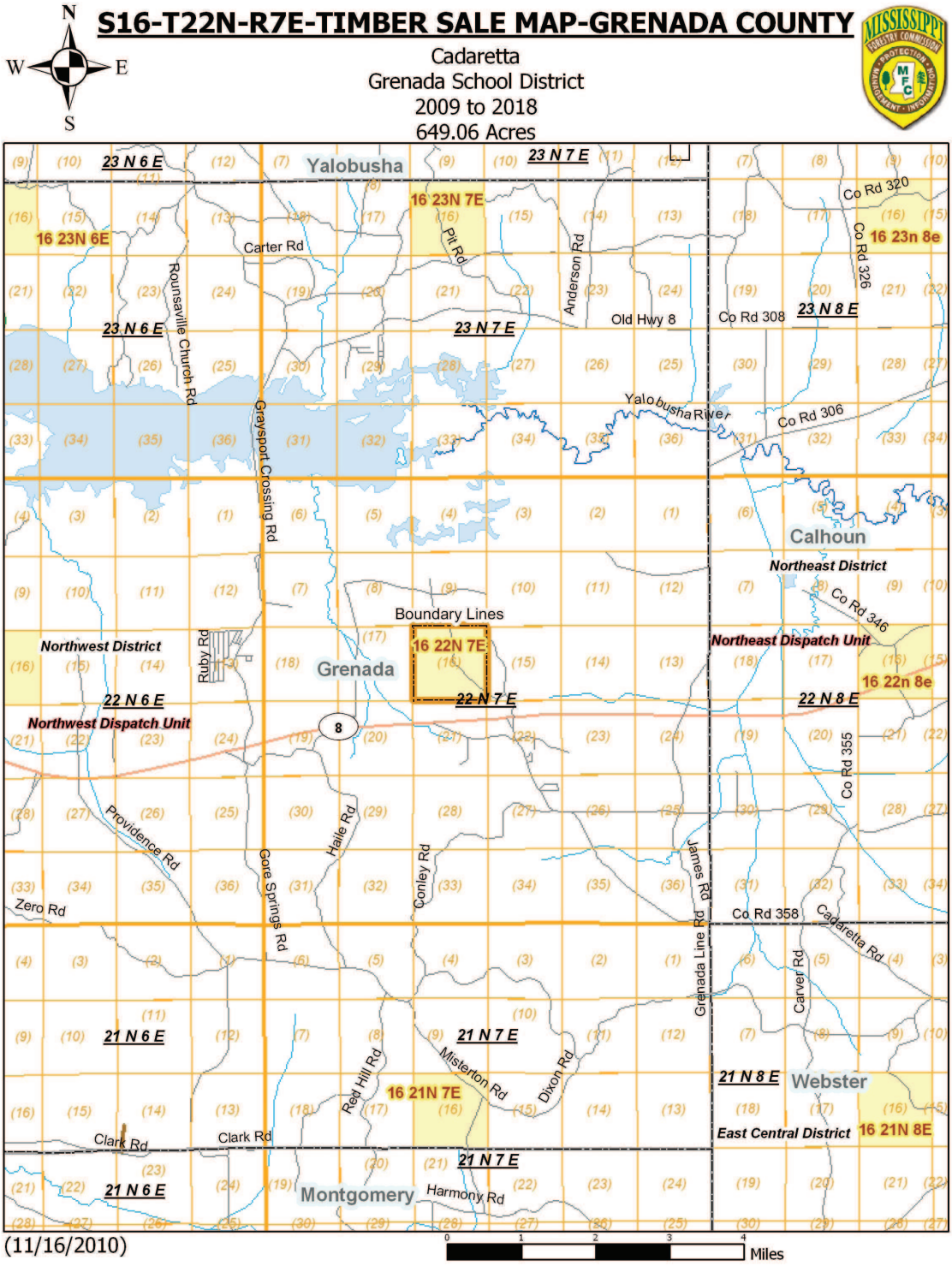
Activity Recommendations

Property Activities

Routine inspections and general maintenance of the roads, Firelanes, and boundary lines will ensure overall appearance and aesthetics of the property.

This work is scheduled for **2015** and **2020**, when the boundary lines are painted.

This section will, also, be inspected for Beaver Dams, with demolition of any dams scheduled as needed. The estimated cost of this work is $500 per demolition. Because the actual need for this work is unpredictable, this cost is NOT included in the Expense & Revenue Spread Sheets included in this plan.


S16-T22N-R7E-TIMBER SALE MAP-GRENADA COUNTY
Cadaretta
Grenada School District
2009 to 2018
649.06 Acres
N
W
E
S
Yalobusha
Calhoun
Grenada
Montgomery
Webster
Boundary Lines
16 23N 7E
16 23N 6E
16 23n 8e
16 22N 7E
16 22n 8e
16 21N 7E
16 21N 8E
23 N 6 E
23 N 7 E
23 N 8 E
22 N 6 E
22 N 7 E
22 N 8 E
21 N 6 E
21 N 7 E
21 N 8 E
Northwest District
Northwest Dispatch Unit
Northeast District
Northeast Dispatch Unit
East Central District
Carter Rd
Rounsaville Church Rd
Graysport Crossing Rd
Pit Rd
Anderson Rd
Old Hwy 8
Co Rd 320
Co Rd 326
Co Rd 308
Co Rd 306
Yalobusha River
Co Rd 346
Ruby Rd
Providence Rd
Zero Rd
Gore Springs Rd
Halle Rd
Conley Rd
James Rd
Co Rd 355
Co Rd 358
Cadaretta Rd
Grenada Line Rd
Carver Rd
Red Hill Rd
Misterton Rd
Dixon Rd
Clark Rd
Harmony Rd
8
(11/16/2010)
0 1 2 3 4
Miles

S16-T22N-R7E GRENADA COUNTY LEGEND

Property
Property (1)

Category 1: Stands
Sawtimber (8)
Sub-Merchantable (7)
Clear Cut (1)

Category 3: Non-Forest Stands
Non-Forest (5)

MFC Basemap

County Boundary
County Boundary (1)

Quadrangle Grid
USGS Quad (1)

PLS Townships
PLS Townships (1)

Survey Districts
District 2 (1)

Blockgroup (Census 2000)
Blockgroup (Census 2000) (1)

Block (Census 2000)
Block (Census 2000) (3)

Tract/BNA (Census 2000)
Tract/BNA (Census 2000) (1)

County Roads
County Roads (2)

School Sections
School Sections (1)

Public School Districts
GRENADA SCHOOL DISTRICT (1)

US Congressional District
US Cong Dist #1 (1)

MS Senate
8 (1)

MS House
24 (1)

Intermittent Streams
Intermittent Streams (2)

Hydrologic Units (Basins)
YALOBUSHA RIVER ABOVE GRENADA DAM (1)

Historic Forest Boundary
Loblolly/Shortleaf Pine-Oak (1)

MS Forest Habitat
NORTHERN LOESSIAL LOAM HILLS (1)

Physiographic Region
North Central Hills (1)

Soil Associations
sweatman-tippah-smithdale (1)

Surface Geology
WILCOX (1)

MFC Districts
MFC Districts (1)

MFC Dispatch Units
MFC Dispatch Units (1)

MS Outline
MS Outline (1)


S16-T22N-R7E GRENADA COUNTY PLAN MAP
Cadaretta Section
2012 to 2021
649.06 Acres
N
W
E
S
MISSISSIPPI FORESTRY COMMISSION
Dividing Ridge Rd
SM '98
Pw.Line
Ditch
SM '98
smz
Pond
PST '88
HST '44
SM '98
SMZ
Sub-Mer.'96
(16)
Northwest District
22 N 7 E
Grenada
Northwest Dispatch Unit
Pub.Rd.
PST '60
Clear Cut-(8-'11)
Sub.Mer. '98
Alice Williams Rd
Boundary Lines
SMZ
SMZ
SM '98
(8)
(9)
(15)
(17)
(21)
(22)
(12/19/2011)
0
0.1
0.2
0.3
0.4
Miles

Stand Activity Schedule for
Grenada County BOE
16 22N 7E

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2013					
1	13	Harvest, Mechanical, 1st Thin, Machine, Loblolly	233	$8,155.00	$29,125.00
3	20	Regeneration, Artificial, Plant, Hand, Loblolly	105	$10,500.00	$0.00
3	20	Site Preparation, Chemical, Broadcast, Aerial, Combination	105	$10,500.00	$0.00
3	20	Site Preparation, Other, Burn, Hand, Cut-Over	105	$2,625.00	$0.00
7	3	Harvest, Mechanical, Thin, Machine, Loblolly	30	$1,050.00	$16,950.00
		Yearly Totals	578	$32,830.00	$46,075.00
2014					
4	12	Harvest, Mechanical, Final, Machine, Cherrybark Oak	66	$2,310.00	$93,060.00
5	18	Harvest, Mechanical, Final, Machine, Loblolly	53	$1,855.00	$54,007.00
		Yearly Totals	119	$4,165.00	$147,067.00
2015					
2	4	Harvest, Mechanical, 1st Thin, Machine, Loblolly	16	$572.95	$2,046.25
2	5	Harvest, Mechanical, 1st Thin, Machine, Loblolly	40	$1,407.00	$5,025.00
2	8	Harvest, Mechanical, 1st Thin, Machine, Loblolly	1	$25.20	$90.00
2	15	Harvest, Mechanical, 1st Thin, Machine, Loblolly	9	$315.00	$1,125.00
2	17	Harvest, Mechanical, 1st Thin, Machine, Loblolly	4	$153.30	$547.50
2	19	Harvest, Mechanical, 1st Thin, Machine, Loblolly	45	$1,574.30	$5,622.50
		Yearly Totals	116	$4,047.75	$14,456.25
2016					
1	13	Fire Protection, Other, Burn, Hand, Fuel Reduction	233	$5,825.00	$0.00

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
4	12	Regeneration, Artificial, Plant, Hand, Cherrybark Oak	66	$5,630.40	$0.00
4	12	Site Preparation, Other, Burn, Hand, Cut-Over	66	$1,650.00	$0.00
4	12	Site Preparation, Chemical, Broadcast, Aerial, Combination	66	$7,948.80	$0.00
5	18	Site Preparation, Chemical, Broadcast, Aerial, Combination	53	$6,360.00	$0.00
5	18	Regeneration, Artificial, Plant, Hand, Loblolly	53	$4,505.00	$0.00
5	18	Site Preparation, Other, Burn, Hand, Cut-Over	53	$1,325.00	$0.00
7	3	Fire Protection, Other, Burn, Hand, Fuel Reduction	30	$750.00	$0.00
		Yearly Totals	620	$33,994.20	$0.00
2018					
2	4	Fire Protection, Other, Burn, Hand, Fuel Reduction	16	$400.00	$0.00
2	5	Fire Protection, Other, Burn, Hand, Fuel Reduction	40	$1,005.00	$0.00
2	8	Fire Protection, Other, Burn, Hand, Fuel Reduction	1	$18.00	$0.00
2	15	Fire Protection, Other, Burn, Hand, Fuel Reduction	9	$233.00	$0.00
2	17	Fire Protection, Other, Burn, Hand, Fuel Reduction	4	$109.50	$0.00
2	19	Fire Protection, Other, Burn, Hand, Fuel Reduction	45	$1,124.50	$0.00
		Yearly Totals	116	$2,890.00	$0.00
2019					
1	13	Wildlife Management, Other, Burn, Hand, Habitat Improvement	233	$5,825.00	$0.00
7	3	Wildlife Management, Other, Burn, Hand, Habitat Improvement	30	$750.00	$0.00
		Yearly Totals	263	$6,575.00	$0.00
2021					
2	4	Wildlife Management, Other, Burn, Hand, Habitat Improvement	16	$409.25	$0.00
2	5	Wildlife Management, Other, Burn, Hand, Habitat Improvement	40	$1,005.00	$0.00
2	8	Wildlife Management, Other, Burn, Hand, Habitat Improvement	1	$18.00	$0.00

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2	15	Wildlife Management, Other, Burn, Hand, Habitat Improvement	9	$225.00	$0.00
2	17	Wildlife Management, Other, Burn, Hand, Habitat Improvement	4	$109.50	$0.00
2	19	Wildlife Management, Other, Burn, Hand, Habitat Improvement	45	$1,124.50	$0.00
		Yearly Totals	116	$2,891.25	$0.00
		Grand Totals	**1,927**	**$87,393.20**	**$207,598.25**