

FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For: Lowndes County BOE

Prepared By: S. Todd Matthews MS Forestry Commission

Time Period Covered by This Plan: 2012 - 2021

Date Plan Prepared: 2012-02-28

Plan Type: Stewardship / Stewardship

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

Property Name: Scale Section 16-18S-17W

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LANDOWNER INFORMATION

Name: Lowndes County BOE
Mailing Address: 1053 Highway 45 South
City, State, Zip: Columbus, MS 39701
Country: United States of America

Contact Numbers: Home Number:

Office Number: 662-329-5722 Fax Number: 662-244-5043

E-mail Address:

Social Security Number (optional):

FORESTER INFORMATION

Name: S. Todd Matthews, Service Forester

Forester Number: 02102

Organization: MS Forestry Commission

Street Address: 717 5th Street N.

City, State, Zip: Columbus, MS 39701

Contact Numbers: Office Number: 662-327-3352

Fax Number:

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

PROPERTY LOCATION

County: Lowndes Total Acres: 644 Latitude: -88.32 Longitude: 33.5

Section: 16 Township: 18S Range: 17W

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.

DISCLAIMER

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.

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.

OBJECTIVES

Fire Protection

The goal is to protect the resource from wildfires, by establishing and maintaining firebreaks around the property; annually inspect possible signs of insect infestations and disease; and prohibit grazing until terminal bud is beyond reach of livestock.

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 referred to as "Scales" section, and is located on Phillips Hill Road. Approximately 96 acres of the tract is loblolly pine reproduction. Approximately 80 acres is considered to be sawtimber. 86 acres are pulpwood and there is a small Chip-and-Saw stand that is approximately 3 acres. This section has approximately 363 non-forested acres.

Water Resources

A single creek (Vernon Branch) was identified during a reconnaissance of the property. However, intermittent streams and drains identified will be managed in accordance with Mississippi's Best Management Practices.

Threatened and Endangered Species

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

Archeological or Cultural Resources:

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

No Archeological or Cultural Resources Were Identified:

No Archeological or Cultural resources were identified during a reconnaissance of the property. However, if Archeological or Cultural resources are discovered anytime on the property special managements measures will be applied immediately in order preserve these sensitive areas.

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.

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

Boundary lines on this section have not previously been maintained. The Mississippi Forestry Commission will work with the Lowndes County School Board to establish the boundary lines, and then maintain them on a 4 year rotation.

SOIL TYPES

Ма

The Mantachie component makes up 85 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.

CoA

The Caledonia component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on coastal plains. 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 high. 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 2 percent. Nonirrigated land capability classification is 1. This soil does not meet hydric criteria. Loblolly Site Index = 90.

Ro

The Rosella component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions. The parent material consists of loamy fluviomarine 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 low. 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 12 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. Loblolly Site Index = 80.

CoB

The Caledonia component makes up 85 percent of the map unit. Slopes are 2 to 5 percent. This component is on coastal plains. 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 high. 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 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria. Loblolly Site Index = 90.

Gu

The Guyton component makes up 90 percent of the map unit. Slopes are 0 to 1 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 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 9 inches during January, February, March, April, May, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. Loblolly Site Index = 95.

SaA

The Savannah component makes up 90 percent of the map unit. Slopes are 0 to 2 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 2w. This soil does not meet hydric criteria. Loblolly Site Index = 81.

PuA

The Prentiss 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 deposits. Depth to a root restrictive layer, fragipan, is 20 to 32 inches. The natural drainage class is moderately well drained. 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 26 inches during January, February, March. 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 = 88.

SaC2

The Savannah component makes up 90 percent of the map unit. Slopes are 5 to 8 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 3e. This soil does not meet hydric criteria. Loblolly Site Index = 81.

Gv

The Guyton component makes up 90 percent of the map unit. Slopes are 0 to 1 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 poorly 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 occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 9 inches during January, February, March, April, May, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. The soil has a slightly sodic horizon within 30 inches of the soil surface. Loblolly Site Index = 85. Slash Site Index = 90.

SaB

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.

SnF

The Smithdale component makes up 43 percent of the map unit. Slopes are 15 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 7e. This soil does not meet hydric criteria. The Saffell component makes up 30 percent of the map unit. Slopes are 15 to 35 percent. This component is on hillslopes on hills. The parent material consists of gravelly 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 low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

RuC2

The Ruston component makes up 95 percent of the map unit. Slopes are 5 to 8 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 moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72

inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. Loblolly Site Index = 84.

STRATA

Strata 1 (includes stand 1)

Strata Description

This is a mixed pine/hardwood pulpwood stand that was an open area that was seeded in 1995. It is not growing well and has not been thinned. The average pine basal area is 40 and the average hardwood basal area is 120. This stand is infested with privet.

Strata Recommendations

It is recommended that these stands be monitored periodically. A first thinning is scheduled for 2017. Following thinning, the stands will be evaluated to determine if a chemical application is necessary to control the privet.

Activity Recommendations

Harvest

The first thinning for these stands is scheduled for 2017. They should be thinned to a Basal Area 75 ± -5 .

Fire Protection

A prescribed burn should be carried out on this property in the late fall or early winter of 20?? and be repeated on a two or three year rotation thereafter. Prescribed fire when used correctly can greatly benefit the health and vigor of a stand. It reduces the undesirable tree species that often crowd out or suppress pines. These unwanted understory trees and shrubs species not only compete for water, nutrients, and growing space, but often contain dead needles and leaves that act as ladder fuels allowing a fire to climb into the overstory crowns. Prescribed fire also reduces the hazardous fuel loads within the stand and prevents damage in the event of a wildfire.

This strata is scheduled to be burned in 2020.

Strata 2 (includes stand 9)

This pine sawtimber stand was established in 1971. The average merchantable height for this stand is 56 feet. Pine basal area is 90 with about 250 trees per acre.

Strata Description

This stand contains the best pine timber on the entire section. It was not harvested at the same time as stand 13 because at the time, pine prices were extremely low. It is scheduled to be harvested at the same time as stands 11 and 12.

Activity Recommendations

Harvest

This stand is schedule for a regeneration cut in 2017.

Site Preparation

This stand should be sheared and raked the year following the harvest.

Regeneration

It is recommended that this stand be replanted with genetically improved loblolly pine seedlings at a rate of 691 trees per acre.

Post Plant

This stand should be treated with an aerially broadcast chemical application treatment targeting both woody and herbaceous competition post planting.

Strata 3 (includes stand 5)

Strata Description

This is a mixed, natural sawtimber stand that is approximately 23 years old. Pine basal area is 40 square feet per acre with about 70 trees per acre. Hardwood basal area is 50 square feet per acre with about 70 trees per acre.

Strata Recommendations

This stand should be monitored periodically. No activities are scheduled for this stand during the timeframe of this management plan.

Strata 4 (includes stand 10)

Strata Description

This is a pine pulpwood stand that was an open area which was planted in 1994. It averages 120 square feet of basal area per acre. Average merchantable height for this stand is 48 feet.

Activity Recommendations

Site Preparation

This stand should be sheared and raked the year following the harvest.

Harvest

This stand is scheduled for a regeneration cut in 2015.

Regeneration

It is recommended that this stand be replanted with genetically improved loblolly pine seedlings at a rate of 691 trees per acre.

Post Plant

This stand should be treated with an aerially broadcast chemical application treatment targeting both woody and herbaceous competition post planting.

Strata 5 (includes stand 12)

Strata Description

This pine regeneration stand was harvested in 2009 and planted in 2010. The planting failed and the stand was replanted in 2011. The stand averages about 700 trees per acre. The trees are about 2 feet tall.

Activity Recommendations

This stand should be monitored periodically for damage from pests, fire and humans.

Strata 6 (includes stand 11)

Strata Description

This is a pine chip and saw plantation that was an open area which was planted in 1991. It has never been thinned and it is doubtful that it would respond as desired if it was thinned. Also, because it it such small acreage, it is doubtful that it would be possible to find a buyer for a thinning. This stand averages 120 square feet of basal area per acre and it averages 400 trees per acre.

Activity Recommendations

Harvest

This stand is scheduled for a regeneration cut in 2015.

Site Preparation

This stand should be sheared and raked the year following the harvest.

Regeneration

It is recommended that this stand be replanted with genetically improved loblolly pine seedlings at a rate of 691 trees per acre.

Post Plant

This stand should be treated with an aerially broadcast chemical application treatment targeting both woody and herbaceous competition post planting.

Strata 7 (includes stand 8)

Strata Description

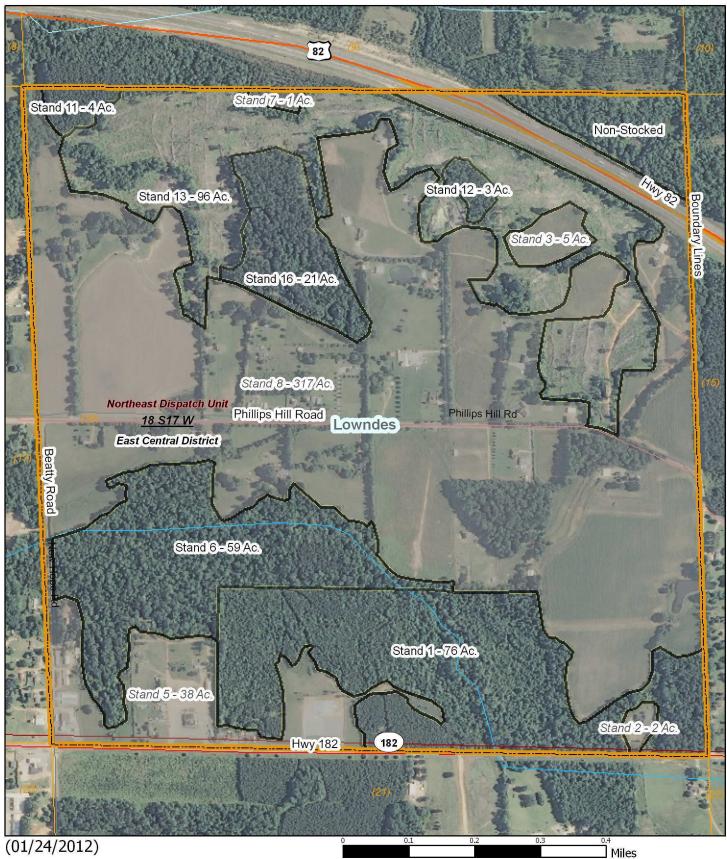
This stand is considered non-stocked due to its size, wet soil conditions and access difficulty.



Scales S16-T18S-R17W 2012 to 2021

644 Acres





Scales



Property Property Category 1: Stands Clear Cut Non-Stocked Reproduction Sub-Merchantable Pulpwood Chip-n-Saw Sawtimber Poles Category 2: Stands Clear Cut Non-Stocked Reproduction Sub-Merchantable Pulpwood Chip-n-Saw Sawtimber Poles Category 3: Non-Forest Stands Non-Forest



Forest Health (Points)

Picture Bogg Plant

***** Cogan Grass

Kudzu

Japanese Climbing Fern Chinese Tallow

Privet

Southern Pine Beetle

▲ Sirex Wasp ▲ IPPS

Hydrology (Points)

Concrete Dam Beaver Dam Earthen Dam Permanent Temporary

Wooden Other

Culvert Pond

Wildlife (Points)

Food Plot Water Hole Feeder

Boundary Corners Property Section **Quarter Section Areas** Structures Barn Tractor Shed Out Building Single-Family Multi-Family Camp House Club House Office Building Manufacturing Warehouse Chicken House Horse Stall Milking Parlor I Hog Pen Blind Stand Hospital H Nursing Home Dr. Clinic

H	State Facility
	Office
	Work Center
	Materials Depot
	Prison
	School
₽	Church
4	Mosque
4	Synagogue
4	Other

Cruise Plots Pre-Cruise Post-Cruise

Other

Towers Logging Deck Locked UnLocked Water Natural Gas

Property Roads/Trails

Drive Ways Access Road Logging Road Skid Trail Farm Road Hiking Trail

Horseback Riding Trail

Boundary Lines Archeology Cemetery **Drilling Sites** Education

Boundary Lines (cont) Forest Health **Invasive Species** Management Compartment Military Area Natural Area Property Recreation Rights of Way SMZ Special Use Stand Surface Mining Threatened/Endangered Species Visual Buffer

Temporary Line Permanent Fire Break
Wildlifo (Linos)

Green Strip				
Fire Mitigation	D			

Fire Control

Mitigation Burn Silviculture Burn Site-Prep Burn Wildfire	
School Land Lease	

SCHO	oi Lanu Lec
	Hunting
	Minerals
1111	Recreation

Restricted Area SMZ Archeology, Cemetery Visual Buffer

Special Use Natural Area Education Recreation Military Area

Large Utility Red-Cockaded Woodpecker **Gopher Tortoise** Picture Bogg Plant Coal

Dirt Water Oil Natural Gas

Kudzu

IPPS

Gravel

Forest Health (Polygons) Cogan Grass

Chinese Tallow Privet Southern Pine Beetle Sirex Wasp

Japanese Climbing Fern

Farm/Residential Land Residential Land Agricultural Land Industrial Land Recreational Land Catfish Farming Land Other Land

Forest Land

Commercial Land Management Compartment

Management Regeneration Site Preparation Post Plant Site Improvement Vegetation Control

Stand Improvement Invasive Species Control Harvest

Fire Protection Technical Wildlife Management

Property Activities Roads SM7

Forest Health Recreation Site Restoration

Transportation (Lines)

City Streets County Roads 3 Digit Highway Interstate Highway
US Highway State Highway Natchez Trace Parkway Runways/Airports Active RR

Abandoned RR

Hydrology (Lines)

Mississippi River Major River Primary Stream Intermittent Stream Canal

Ditch Earthen Dam Concrete Dam

Utilities (Lines) : Large Electrical

Local Utility Large Pipeline Small Pipeline Gas Line Utility Line

Water Line

Stand Activity Schedule for Lowndes County BOE 16 18S 17W

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue	
2015	2015					
2	9	Harvest, Mechanical, Regeneration, Machine, Loblolly	21	\$735.00	\$41,370.00	
4	10	Harvest, Mechanical, Regeneration, Machine, Loblolly	4	\$140.00	\$2,760.00	
6	11	Harvest, Mechanical, Regeneration, Machine, Loblolly	3	\$105.00	\$90.00	
		Yearly Totals	28	\$980.00	\$44,220.00	
2016						
2	9	Post Plant, Chemical, Broadcast, Hand, Combination	21	\$1,050.00	\$0.00	
2	9	Regeneration, Artificial, Plant, Hand, Loblolly	21	\$1,890.00	\$0.00	
2	9	Site Preparation, Mechanical, Shear/Rake, Machine, Cut-Over	21	\$4,200.00	\$0.00	
4	10	Post Plant, Chemical, Broadcast, Aerial, Combination	4	\$200.00	\$0.00	
4	10	Regeneration, Artificial, Plant, Hand, Loblolly	4	\$360.00	\$0.00	
4	10	Site Preparation, Mechanical, Shear/Rake, Machine, Cut-Over	4	\$800.00	\$0.00	
6	11	Post Plant, Chemical, Broadcast, Aerial, Woody	3	\$150.00	\$0.00	
6	11	Regeneration, Artificial, Plant, Hand, Loblolly	3	\$270.00	\$0.00	
6	11	Site Preparation, Mechanical, Shear/Rake, Machine, Cut-Over	3	\$600.00	\$0.00	
		Yearly Totals	84	\$9.520.00	\$0.00	
2017						
1	1	Harvest, Mechanical, 1st Thin, Machine, Loblolly	82	\$2,870.00	\$18,860.00	
		Yearly Totals	82	\$2,870.00	\$18.860.00	
2020						
1	1	Fire Protection, Other, Burn, Hand, Hazard Mitigation	82	\$2,050.00	\$0.00	

Strata Stand	Activity	Acre	Est. Cost	Est. Revenue
	Yearly Totals	82	\$2,050.00	\$0.00
	Grand Totals	276	\$15.420.00	\$63.080.00