# Vision • Commitment • Pride

# FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For: Holmes County Schools BOE

> Prepared By: Mac Ables Miss. Forestry Comm.

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: Barksdale Section** 

### TABLE OF CONTENTS

LANDOWNER INFORMATION	3
FORESTER INFORMATION	3
DISCLAIMER	3
INTRODUCTION	3
OBJECTIVES	4
PROPERTY DESCRIPTION	4
GENERAL PROPERTY RECOMMENDATIONS	5
SOIL TYPES	8
STRATA	9
OTHER PLAN ACTIVITIES	11
PLAN MAP	13
PLAN MAP	14
PLAN MAP	15
PLAN MAP	16
PLAN MAP	17
STRATA ACTIVITY SCHEDULE	18

#### LANDOWNER INFORMATION

Name: Holmes County Schools BOE

Mailing Address: P. O. Box 630

City, State, Zip: Lexington, MS 39095 Country: United States of America

Contact Numbers: Home Number:

Office Number: 662-834-2175

Fax Number:

E-mail Address:

Social Security Number (optional):

### FORESTER INFORMATION

Name: Mac Ables, Servicer Forester

Forester Number: 02368

Organization: Miss. Forestry Comm.

Street Address: P.O. Box 483

City, State, Zip: Lexington, MS 39095

Contact Numbers: Office Number: 662-834-3467

Fax Number:

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

#### PROPERTY LOCATION

County: Holmes Total Acres: 636 Latitude: -89.89 Longitude: 33.15

Section: 16 Township: 15N Range: 4E

#### **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**

#### 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 located 1 and 1/2 miles southeast of Bowling Green on Bowling Green Road. Access is good from Bowling Green Road to the south and through the Barksdale property from the north and east. Terrain is gently rolling to steep. Soil type is best suited to growing Loblolly Pines. This section is all forested acres except for 6.60 acres. The nonforested acres on this section are composed of roads and one small open field in the Southwest corner.

#### Water Resources

This property was evaluated on January 18,2012 for water resources. No perennial water resources were identified during a reconnaissance of the property. However, intermittent streams and drains identified will be managed in accordance with Mississippi's Best Management Practices.

#### Timber Production

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

#### Threatened and Endangered Species

No threatened and endangered species were identified during the reconnaissance and evaluation of this property. This property was evaluated on January 18, 2012 for endangered species. For more information on endangered species in your area, you may visit: museum.mdwfp.com/science/ms endangered species.html

#### Archeological and Special Sites

This property was evaluated for Archeological and special sites on January 18, 2012. During the evaluation, there were no sites located throughout the property. For more information on historic preservations, contact the Mississippi Department of Archives and History or visit <a href="http://mdah.state.ms.us/hpres">http://mdah.state.ms.us/hpres</a>.

#### Interaction with Surrounding Property

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

#### Soils General

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

#### 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. Practices such as thinning in pine stands or marked timber sales in hardwoods are often recommeded. Once a stand has reached it maximum density, the growth rate begins to decline. Once the growth rate declines, the overall health of the stand begins to decline. Thinning or marked timber sales reduce the stand density, allowing the growth rate to increase thus increasing the overall vigor of the stand. Prescribed burning is often recommended to reduce hardwood competition within pine stands. A reduction in competition will assists in a faster growth rate thus creating a healthy vigorous stand.

#### 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.

Boundary lines should be painted in 2015 and 2020.

**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.

#### 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.

Several practices can be carried out throughtout this property to help increase wildlife habitat. Early successional plants made up of native grasses are beneficial to wildlife. These early successional habitats provide forbs, and shrubs that are low to the ground and extreemly beneficial to smaller wildlife species. A balance of grasses, forbs and shrubs should be maintained along road sides, fire breaks and open areas throughout the property. Recomended practices to maintain a well balanced plant community are disking and burning.

**ACCESS ROADS**: Access roads and fire breaks often give opportunity for vegetation managment. Areas that exceed in width along access roads througout this property should be disked on a 3 year rotation and managed for native grasses. Disking down existing water bars and water turnouts should be avoided.

**FIRE BREAKS**: Fire breaks can be managed in many ways. Selected areas where fire breaks are long and narrow can serve as annual food plots or areas to disk and manage for natural warm season grasses. Areas that are not used as annual food plots should be disked on a 3 year rotation to help maintian the early stages of succession. Disking down water bars and water turn outs should be avoided on permanent fire breaks.

**OPEN AREAS**: Open areas throughout this property should be used for annual seasonal planting or placed on a prescribed burning regime.

- Disking will reduce plant density and releases the natural seedbed to sunlight. This will allow desired natural vegetation to germinate from the seedbed and create and diversity of desired native plants. Disking should be done in the fall or winter on a 3 year rotation. Disking should be done between October-February on a 2-3 year rotation.
- Prescribed Fire Prescribed burning will create a balanced diveresity of native warm season grasses that are desired by wildlife. Precribed fire will also help control undesired hardwoods from regenerating within the open areas. Fire helps to increase food availability by letting more sunlight reach the forest floor, encouraging new growth of native plants. Burning should be done in the spring season on a 2-3 year rotation. March is the

recommeded month for prescribed fire. For more information on prescribed burning, you may contact your local Mississippi Forestry Commission county office.

- Seasonal Planting- Long and narrow food plots are recommeded. Food plots should be established in areas where sunlight is not excluded. Once food plots are established, soil testing is highly recommeded. A soil test will give the exact prescription for proper fertilization. The abundance and condition of wildlife are related directly to the soil. Proper fertilization will dramatically increase forage production in return providing an abuundance of habitat for native wildlife. Open areas can be planted in either/or warm or cool season plants. Warm season plantings can include but not limited to plants such as cowpeas, American jointvetch, alyce clover, or white clover. Cool season plantings can include but not limited to wheat, clovers and oats. Rye grass is not recommeded because of it's density at ground level after the growing season. Other plants such as Honeysuckle and Common Ragweed are excellent sources of protien and should be fertilized throughout the growing season.
- Bush Hogging: Clipping is not recommeded. Clipping increases plant density at ground level and is not effective in controlling undesired hardwood species. If clipping is necessary, it should be avoided during the nesting seasons (April 1-August 15th). Clipping is the least desired practice for wildlife management.

Additional publications for wildlife management are attached at the back of this plan. These publications will give additional information on open field management, stem injection, quality vegetation management and controlling non native grasses. You can also visit <a href="https://www.mdwfp.com/privatelands">www.mdwfp.com/privatelands</a> for more information.

#### Timber Management

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

#### Recreation

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

#### SOIL TYPES

SP

The Smithdale component makes up 63 percent of the map unit. Slopes are 12 to 30 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 Providence component makes up 29 percent of the map unit. Slopes are 2 to 15 percent. This component is on uplands. The parent material consists of silty loess over sandy marine deposits. Depth to a root restrictive layer, fragipan, is 18 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 18 inches during January, February, March. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

#### PrC3

The Providence 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 silty loess over sandy marine deposits. Depth to a root restrictive layer, fragipan, is 18 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 18 inches during January, February, March. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. Loblolly Site Index = 87. Longleaf Site Index = 73.

#### **STRATA**

Strata 1

Strata Description

Strata # 1: Consist of Stand #2,7,8 and 10.

This strata is made up of 378.14 acres of Loblolly Pine that was established in 1983. The average DBH for this strata is 11 inches with an average tree height of 50 feet. There is light hardwood competition scattered throughout the strata. Hardwood composition consists of mostly small Sweetgum and Southern Redoak stems. This strata has been thinned and is well stocked at 220 trees per acre. This strata was burned in the spring of 2010 to reduce hardwood competition and fuel reduction. A significant portion of the hardwood competition was controlled by the burn.

### Strata Recommendations

This strata should be managed on a 35 year rotation using sound forestry management practices. It is recommended for this strata to undergo a second thinning and be placed on a 4-5 year burning regime to help control hardwood competition and fuel reduction.

#### **Activity Recommendations**

Harvest

This strata is scheduled for a second thinning in 2015. This strata should be thinned to 100-110 trees per acre leaving the best trees for a residual stand. Trees that are forked,

suppressed and poor in form class should be removed. Mississippi Best Management Practices must be followed during any and all silvicultural practices throughout the life of this plan.

#### 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 must be on site to conduct the burn. Prescribed burning is recommended 2 years after the completion of the first thinning. Prior to burning, this strata should be evaluated to determine if a chemical application is needed to help remove woody competition from the stand. It is recommended for this strata to be placed on a 4 year burning rotation after the first initial burn. Prescribed burning should be applied in the early spring. Burning should be done before April 1st to avoid nesting season of native wildlife.

#### Strata 2

#### Strata Description

Strata # 2: Consist of Stand # 3,4,6,9,11 and 13.

This strata is made up of 251.70 acres of natural pine and hardwood sawtimber that was established in 1948. This strata consists of Loblolly Pine, Blackgum, Elm, Hickory, Red Maple, Yellow Poplar, Post Oak, Southern Redoak, Water Oak, White Oak, and Sweetgum. This strata has an average DBH of 16 inches and an average tree height of 50 feet.

#### Strata Recommendations

Based on age, stand composition and growth, this strata should be considered for a final harvest. This strata should be harvested and replanted with a more vigorous growing species and placed on a 35 year rotation.

#### **Activity Recommendations**

#### Harvest

This strata consisting of Loblolly Pine and mixed hardwoods should undergo a final harvest. All merchantable timber should be removed during harvesting operations. Wet winter logging is not recommeded for this site. This strata is currently scheduled for a final harvest in 2012.

#### Spraying

Aerial Application of Herbicide- Site preparation in the form of an aerial application of a herbicide should be applied to the strata to control and remove competing vegetation. The herbicide should conform to the manufacturer recommendation rates

and specifications. A herbicide representative should be contacted to write a rate and application method recommendation. Aerial Application should be applied in approximately 2 years after final harvest is complete.

#### Burning

A Site Prep Burn is recommended for this strata in order to reduce both herbaceous and woody vegetation for planting access. A prescribed burning plan will be developed by the Mississippi Forestry Commission 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. The prescribed burn should be conducted once Aerial application has been applied and deemed to have taken its full effect.

#### Regeneration and Survival

#### Planting:

It is recommended for this area to planted to Loblolly Pine. Following the site preparation, this strata should be hand planted on a 7 X 9 spacing at 691 seedlings per acre. Seedlings should be genetically improved seedlings and should be stored and handled under the proper conditions. Planting should be done during the normal planting season of December 31 and March 13. Tree planting jobs will be inspected by the Mississippi Forestry Commission to ensure adequate stocking and a proper planting job. Adverse weather conditions such as prolonged dry or cold periods should be taken into consideration when planting. Eighty-five percent of the prescribed planting rate per acre must be planted correctly.

#### **Survival:**

A survival check should be conducted by the Mississippi Forestry Commission in the following fall after the planting has been complete. A survival check should be conducted to ensure adequate stocking per acre so the strata will be a maximum production per acre. If survival is low, the strata should be considered for supplemental planting the following planting season. If strata is deemed fully stocked and survival is at a acceptable level, there should be no more activities for this strata during the life of this plan.

#### OTHER PLAN ACTIVITIES

Boundary Lines painted blue Line Description

It is the responsibility of the School Board to assure all boundary lines are correctly established. Each corner should be adequately identified with significant corner markers. It is the responsibility of the School Board to assure all boundary lines are correctly established. Each corner should be adequately identified with significant corner markers.

Boundary lines should be maintained to prevent future disputes of trespassing and prevent future cost of surveying.

#### Line Recommendations

It is recommended for each boundary line to maintained by the Mississippi Forestry Commission on a 4 year rotation. Boundary lines should be clearly marked in orange boundary line paint in well defined marks. Where applicable, firelanes should be installed on property lines to add access benefits for management activities. The property lines on this section are scheduled to be marked in 2015 and 2020.

#### **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.



Barksdale Section
S16 T15N R4E
2012 to 2022
636.44 Acres
Plan Map





# Legend

# Legend: Barksdale Section



Property Property (1) Category 1: Stands Chip-n-Saw (4) Sawtimber (6)	Category 3: Non-Forest Stands Non-Forest (3)  Boundary Lines Property (2)  Fire Silviculture Burn (2)	Management Compartment  Harvest (2)
MFC Basemap		
County Boundary  County Boundary (1)	School Sections School Sections (1)	MS Forest Habitat  DEEP LOESS HILLS AND BLUFFS (1)
Quadrangle Grid USGS Quad (1)	Public School Districts HOLMES COUNTY SCHOOL DISTRICT (1)	Physiographic Region North Central Hills (1)
PLS Townships PLS Townships (1)	US Congressional District US Cong Dist #2 (1)	Soil Associations smithdale-providence-collins (1)
Survey Districts District 2 (1)	MS Senate 24 (1)	Surface Geology  COOK MOUNTAIN (1)  KOSCIUSKO (1)
Blockgroup (Census 2000) Blockgroup (Census 2000) (1)	MS House 48 (1)	MFC Districts  MFC Districts (1)
Block (Census 2000) Block (Census 2000) (2)	Intermittent Streams Intermittent Streams (3)	MFC Dispatch Units  MFC Dispatch Units (1)
Tract/BNA (Census 2000) Tract/BNA (Census 2000) (1)	Hydrologic Units (Basins)  UPPER BIG BLACK RIVER (1)  UPPER YAZOO RIVER (1)	MS Outline  MS Outline (1)
County Roads County Roads (1)	Historic Forest Boundary  Loblolly/Shortleaf Pine-Oak (1)	



## Soils Map S16 T15N R4E 2012 to 2022 636.44 Acres

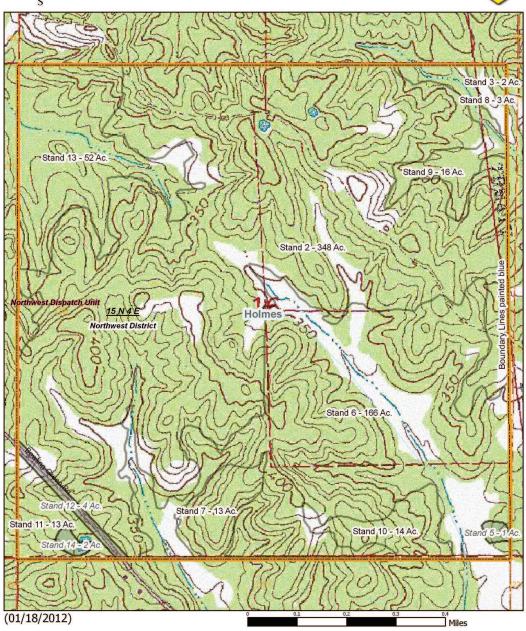






Topography Map S16 T15N R4E 2012 to 2022 636.44 Acres



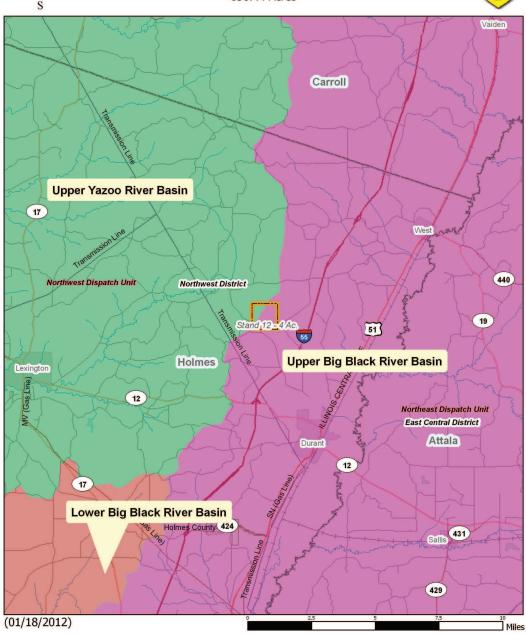




# Hydrology Basins S16 T15N R4E 2012 to 2022

636.44 Acres





# Stand Activity Schedule for Holmes County Schools BOE 16 15N 4E

		10 13/4 45			
Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2012					
2	6	Harvest, Mechanical, Final, Machine, Loblolly	166	\$5,807.55	\$192,727.70
2	9	Harvest, Mechanical, Final, Machine, Loblolly	16	\$560.00	\$25,056.00
2	11	Harvest, Mechanical, Final, Machine, Loblolly	13	\$455.00	\$15,099.50
		Yearly Totals	195	\$6,822.55	\$232,883.20
2014					
2	6	Site Preparation, Chemical, Broadcast, Aerial, Combination	166	\$16,593.00	\$0.00
2	6	Site Preparation, Other, Burn, Hand, Cut-Over	166	\$6,637.20	\$0.00
2	6	Regeneration, Artificial, Plant, Hand, Loblolly	166	\$14,933.70	\$0.00
2	9	Site Preparation, Chemical, Broadcast, Aerial, Combination	16	\$0.00	\$0.00
2	9	Site Preparation, Other, Burn, Hand, Cut-Over	16	\$560.00	\$0.00
2	9	Regeneration, Artificial, Plant, Hand, Loblolly	16	\$1,360.00	\$0.00
2	11	Regeneration, Artificial, Plant, Hand, Loblolly	14	\$1,291.50	\$0.00
2	11	Site Preparation, Other, Burn, Hand, Cut-Over	14	\$574.00	\$0.00
2	11	Site Preparation, Chemical, Broadcast, Aerial, Combination	14	\$1,435.00	\$0.00
		Yearly Totals	589	\$43,384.40	\$0.00
2015					
1	2	Harvest, Mechanical, Thin, Machine, Loblolly	348	\$12,186.65	\$489,729.24
1	7	Harvest, Mechanical, Thin, Machine, Loblolly	13	\$460.60	\$18,509.54
1	8	Harvest, Mechanical, Thin, Machine, Loblolly	3	\$93.10	\$3,741.29
1	10	Harvest, Mechanical, Thin, Machine, Loblolly	14	\$490.00	\$19,691.00

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
		Yearly Totals	378	\$13,230.35	\$531,671.07
2017					
1	2	Fire Protection, Other, Burn, Hand, Fuel Reduction	348	\$8,704.75	\$0.00
1	7	Fire Protection, Other, Burn, Hand, Fuel Reduction	13	\$329.00	\$0.00
1	8	Fire Protection, Other, Burn, Hand, Fuel Reduction	3	\$66.50	\$0.00
1	10	Fire Protection, Other, Burn, Hand, Fuel Reduction	14	\$353.25	\$0.00
	1	Yearly Totals	378	\$9,453.50	\$0.00
2018					
2	13	Harvest, Mechanical, Final, Machine, Misc Red Oak	52	\$1,820.00	\$48,932.00
		Yearly Totals	52	\$1,820.00	\$48,932.00
2019					
2	13	Site Preparation, Chemical, Broadcast, Aerial, Combination	52	\$3,900.00	\$0.00
2	13	Site Preparation, Other, Burn, Hand, Cut-Over	52	\$1,820.00	\$0.00
2	13	Regeneration, Artificial, Plant, Hand, Loblolly	52	\$4,420.00	\$0.00
		Yearly Totals	156	\$10.140.00	\$0.00
		Grand Totals	1.748	\$84,850.80	\$813.486.26