



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-T23N-R6E

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MISSISSIPPI FORESTRY COMMISSION
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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: 628 Latitude: -89.67 Longitude: 33.86
Section: 16 Township: 23N Range: 6E

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 10 road miles Northwest of Gore Springs in Grenada County, and consist of 628.05 acres, of which 611.40 acres are forested. The section consists of the following stands:

STRATUM # 1: Pine Chip-n-Saw-19 yr. old [thinned 2011], (245.81 ac.), estab. 1993. **Stand # 2, 6, 7, and 9.**

STRATUM # 2: Pine Sub. Merchantable-14 yr. old (201.02 ac.), estab. 1998. **Stand # 1, 14, and 16.**

STRATUM # 3: Hardwood Sawtimber SMZ- 58 yr. old (164.57 ac.), estab. 1954. **Stand 4, 5, 10, 11, 12, and 13.**

This 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 Coles Creek watershed. Coles Creek is 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

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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

RpF - Ruston-Providence Assoc.

The Ruston component makes up 36 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 Providence component makes up 28 percent of the map unit. Slopes are 12 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 6e. This soil does not meet hydric criteria. The site index for Loblolly Pine = 85.

Gt - Gullied land, sandy

Generated brief soil descriptions are created for major soil components. The Gullied land is a miscellaneous area. Loblolly Site Index = 68.

PrC3 - Providence, severely eroded

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 = 75.

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 been 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

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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 Chip-n-Saw-19 yr. old [Thinned 2011], (245.81 ac.), estab. 1993. **Stand # 2, 6, 7, and 9.**

The 1st Thinning of this Strata was completed in June 2011. The current stocking consists of 152 trees per acre, with an average diameter of 9 inches and a Basal Area of 77 square feet per acre. The estimated yield is 62 tons per acre.

Strata Recommendations

This Strata is scheduled for a fuel reduction *Prescribed Burn* in **2013**. This will be followed by a wildlife habitat improvement **Prescribed Burn** in **2016**. The Strata will be scheduled for a *2nd Thinning* in **2018** and this will be followed by a fuel reduction *Prescribed Burn* in **2021** (approximatedly 2 years after completion of the timber sale).

Activity Recommendations

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.

Prescribed Burns are scheduled for **2013** and **2021**. The purpose will be to remove logging slash and reduce the fuel load.

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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 *Prescribed Burn* is scheduled for **2016**, with the goal of improving the wildlife habitat.

Harvest

This Strata is scheduled for a *2nd Thinning* in **2018** (stand age 25). The purpose will be to reduce the Basal Area to 80 square feet per acre. Any pulpwood and diseased, damaged and ill formed trees will be targeted for removal; with the goal of a residual stand composed, primarily, of dominant and codominant trees of sawtimber or potential sawtimber class. *Stand and market conditions will dictate the actual timing of the sale.*

Strata 2

Strata Description

Pine Sub-Merchantable-14 yr. old (201.02 ac.), estab. 1998. **Stand # 1, 14, and 16.**

Current stocking consists of 379 trees per acre, with an average diameter of 7 inches. The Basal Area is 102 square feet per acre.

Strata Recommendations

This Strata is scheduled for a *1st Thinning* in **2015** (stand age 17). This will be followed by a fuel reduction Prescribed Burn in **2018** and a wildlife habitat improvement Prescribed Burn in **2021**.

Activity Recommendations

Harvest

A 1st thinning is scheduled for **2015** (stand age 17). 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

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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 *Prescribed Burn* is scheduled in **2018**. The purpose will be to remove logging slash and to 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 *Prescribed Burn* is scheduled in **2021**, with the objective of wildlife habitat improvement.

Strata 3

Strata Description

Hardwood Sawtimber SMZ-58 yr. old (164.57 ac.), estab. 1954. Stand # 4, 5, 10, 11, 12, and 13. [*This is a Restricted Management Zone.*]

Current stocking consists of 89 trees per acre, with an average diameter of 13 inches. The Basal Area is 80 square feet per acre. The estimated yield is 57 tons per acre. Species include both Red and White oaks, Hickory, Sweetgum, Green Ash, Elm, Persimmon and Red Maple.

This Strata is being managed on a 70 year rotation.

Strata Recommendations

This strata will be managed on an 70 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 for this Strata at this time.

OTHER PLAN ACTIVITIES

Boundary Lines

Line Description

The *Boundary Lines* were last painted in **2010**. They were marked with Blue paint.

Line Recommendations

Boundary Line Maintenance is scheduled in **2012** and **2017**. The 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.

Firelanes were established down all boundary lines in **2011**, to improve access to this section. Maintenance work on these Firelanes will be scheduled during the same years that the boundary lines are painted.

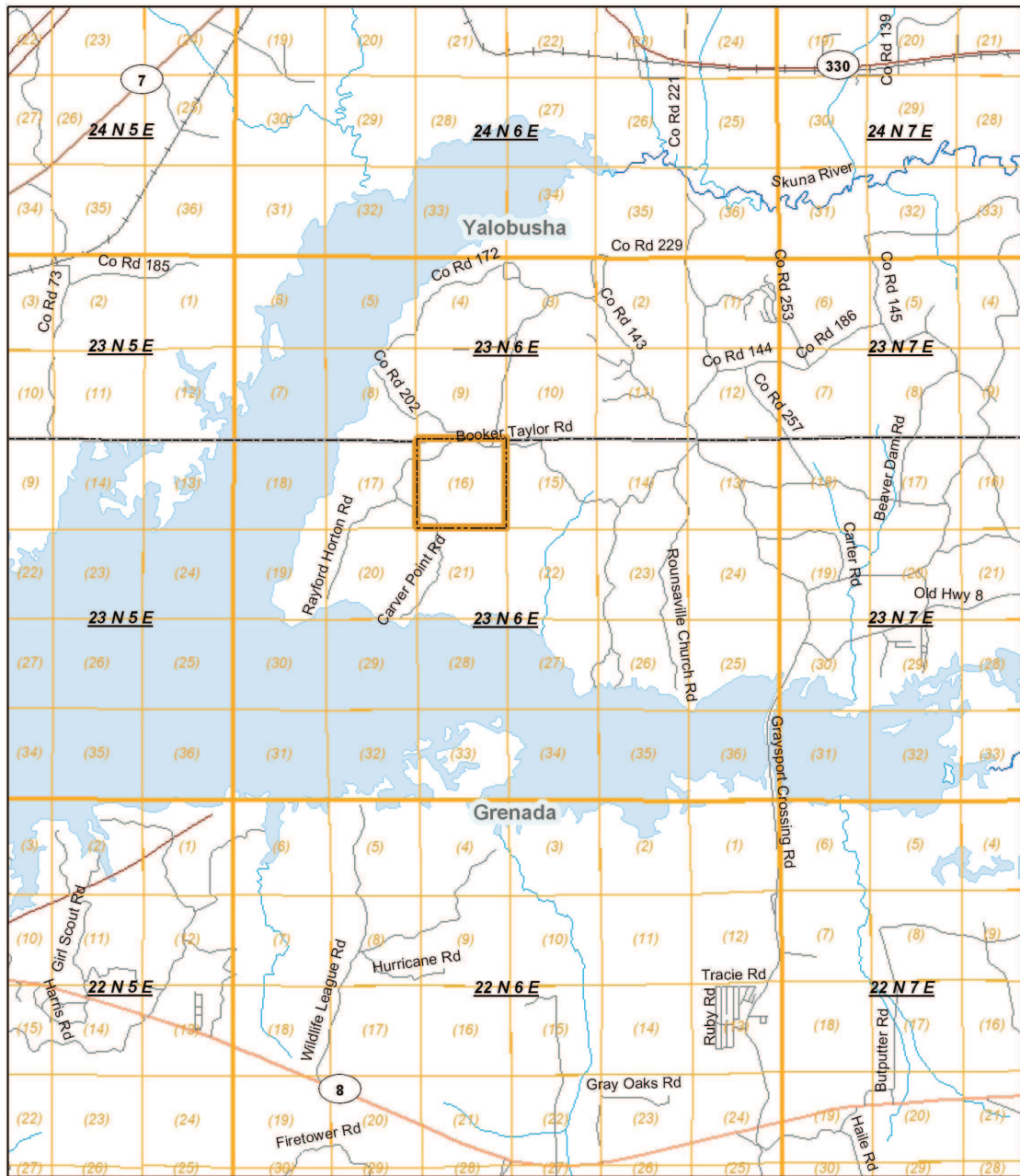
The next *Firelane Maintenance* is scheduled in **2017**.

S16-T23N-R6E GRENADA COUNTY ROAD MAP



S16-T23N-R6E GRENADA COUNTY ROAD MAP

Carvers Point Section
2012 to 2021
628.05 Acres




(01/07/2012)

0 1 2 3 4 Miles





S16-T23N-R6E GRENADA COUNTY LEGEND


Property

 Property (1)


Category 1: Stands

 Sub-Merchantable (3)


 Chip-n-Saw (4)

 Sawtimber (6)

Category 3: Non-Forest Stands


 Non-Forest (3)

Boundary Lines


 Property (1)

MFC Basemap


County Boundary

 County Boundary (2)


Quadrangle Grid

 USGS Quad (2)


PLS Townships

 PLS Townships (2)


Survey Districts

 District 2 (2)


Blockgroup (Census 2000)

 Blockgroup (Census 2000) (2)


Block (Census 2000)

 Block (Census 2000) (12)


Tract/BNA (Census 2000)

 Tract/BNA (Census 2000) (2)


County Roads


 County Roads (12)

School Sections


 School Sections (1)

Public School Districts

 GRENADA SCHOOL DISTRICT (2)

 COFFEEVILLE SCHOOL DISTRICT (1)

US Congressional District

 US Cong Dist #1 (2)

MS Senate


 8 (1)

 9 (1)


MS House

 24 (2)


Intermittent Streams

 Intermittent Streams (2)

Hydrologic Units (Basins)

 YALOBUSHA RIVER ABOVE GRENADA DAM (2)


Historic Forest Boundary

 Red Oak-Hickory-Shortleaf Pine (2)


MS Forest Habitat

 NORTHERN LOESSIAL LOAM HILLS (2)

Physiographic Region

 North Central Hills (2)


Soil Associations

 smithdale-providence-collins (2)

Surface Geology

 TALLAHATTA/NESHOBA SAND (2)


MFC Districts

 MFC Districts (1)

MFC Dispatch Units

 MFC Dispatch Units (1)

State Parks

 State Parks (1)

MS Outline

 MS Outline (1)

S16-T23N-R6E GRENADA COUNTY PLAN MAP

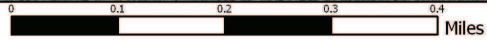


S16-T23N-R6E GRENADA COUNTY PLAN MAP

Carvers Point Section
2012 to 2021
628.05 Acres



(01/07/2012)



Stand Activity Schedule for
Grenada County BOE
16 23N 6E

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2013					
1	2	Fire Protection, Other, Burn, Hand, Fuel Reduction	37	\$923.75	\$0.00
1	6	Fire Protection, Other, Burn, Hand, Fuel Reduction	8	\$200.00	\$0.00
1	7	Fire Protection, Other, Burn, Hand, Fuel Reduction	7	\$169.50	\$0.00
1	9	Fire Protection, Other, Burn, Hand, Fuel Reduction	194	\$4,845.50	\$0.00
Yearly Totals			246	\$6,138.75	\$0.00
2015					
2	1	Harvest, Mechanical, 1st Thin, Machine, Loblolly	182	\$6,370.00	\$22,750.00
2	14	Harvest, Mechanical, 1st Thin, Machine, Loblolly	15	\$518.35	\$1,851.25
2	16	Harvest, Mechanical, 1st Thin, Machine, Loblolly	4	\$133.35	\$476.25
Yearly Totals			201	\$7,021.70	\$25,077.50
2016					
1	2	Wildlife Management, Other, Burn, Hand, Habitat Improvement	37	\$923.75	\$0.00
1	6	Wildlife Management, Other, Burn, Hand, Habitat Improvement	8	\$200.00	\$0.00
1	7	Wildlife Management, Other, Burn, Hand, Habitat Improvement	7	\$169.50	\$0.00
1	9	Wildlife Management, Other, Burn, Hand, Habitat Improvement	194	\$4,845.50	\$0.00
Yearly Totals			246	\$6,138.75	\$0.00
2018					
1	2	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	37	\$1,293.25	\$20,137.75
1	6	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	8	\$280.00	\$4,360.00
1	7	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	7	\$237.30	\$3,695.10

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
1	9	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	194	\$6,783.70	\$105,631.90
2	1	Fire Protection, Other, Burn, Hand, Fuel Reduction	182	\$4,550.00	\$0.00
2	14	Fire Protection, Other, Burn, Hand, Fuel Reduction	15	\$370.25	\$0.00
2	16	Fire Protection, Other, Burn, Hand, Fuel Reduction	4	\$95.25	\$0.00
Yearly Totals			446	\$13,609.75	\$133,824.75
2021					
1	2	Fire Protection, Other, Burn, Hand, Fuel Reduction	37	\$923.75	\$0.00
1	6	Fire Protection, Other, Burn, Hand, Fuel Reduction	8	\$206.50	\$0.00
1	7	Fire Protection, Other, Burn, Hand, Fuel Reduction	7	\$169.50	\$0.00
1	9	Fire Protection, Other, Burn, Hand, Fuel Reduction	194	\$4,845.50	\$0.00
2	1	Wildlife Management, Other, Burn, Hand, Habitat Improvement	182	\$4,550.00	\$0.00
2	14	Wildlife Management, Other, Burn, Hand, Habitat Improvement	15	\$370.25	\$0.00
2	16	Wildlife Management, Other, Burn, Hand, Habitat Improvement	4	\$95.25	\$0.00
Yearly Totals			446	\$11,160.75	\$0.00
Grand Totals			1,584	\$44,069.70	\$158,902.25