

FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For: Forrest County Schools

Prepared By: Jake Camp MS Forestry Commission

Time Period Covered by This Plan: 2012 - 2021

Date Plan Prepared: 2012-02-20

Plan Type: Stewardship / Stewardship

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

Property Name: 16 2N 12W

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LANDOWNER INFORMATION

Organization: Forrest Co Board of Education
Name: Forrest County Schools

Mailing Address: 400 Forrest St.

City, State, Zip: Hattiesburg, MS 39403 Country: United States of America

Contact Numbers: Home Number:

Office Number: 601-545-6055 Fax Number: 601-545-6054

E-mail Address:

Social Security Number (optional): 000000000

FORESTER INFORMATION

Name: Jake Camp, Service Forester

Forester Number: 02514

Organization: MS Forestry Commission Street Address: 477 Southgate Rd.

Street Address: 477 Southgate Rd. City, State, Zip: Hattiesburg, MS 39401

Contact Numbers: Office Number: 601-583-4240

Fax Number: 601-583-2500

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

PROPERTY LOCATION

County: Forrest Total Acres: 648 Latitude: -89.2 Longitude: 31.13

Section: 16 Township: 2N Range: 12W

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 property is in Section 16, Township 2 North, Range 12 West, Forrest County, Mississippi. Re-establishing and maintaining fire breaks along boundary lines would greatly reduce the threat of a wildfire crossing onto and/or in from adjacent properties. Furthermore, maintaining good relationships with lease holders and adjacent landowners will increase effective land management practices, somewhat reduce intentional and/or un-intentional causes of wildfires, and promote good public relations and environmental education within the community.

This tract contains 198 acres of Longleaf Pine reproduction, 5 acres of mixed Pine and Hardwood sawtimber, 145 acres of submerchantable Longleaf Pine, 8 acres of stands that were left as smz areas to controll runoff from sportsmans lake, 53 acres of a recent clear cut, 8 acres of sawtimber left as a buffer around a county dump site, 131 acres of bottomland streamside management areas, 2 acres containing a cemetery, 12 acres of Slash Pine pulpwood, and 87 acres of non forested area which have no management activities planned.

Water Resources

Lakes, perrenial streams, intermittent streams and drains identified within this property 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 your property. However, this area meets habitat requirements for endangered species such as, but not limited to, the Red-Cockaded Woodpecker (*Picoides borealis*) and the Gopher Tortoise (*Gopherus polyphemus*). Continued surveillance should be done to ensure these species are preserved should their presence be discovered.

Interaction with Surrounding Property

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

Archeological or Cultural Resources

These areas can range from churches, old cemeteries, natural springs, Indian mounds, to home sites or other areas of historical significance. No archeological or cultural resources were identified during a reconnaissance of this 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

Petal

The Petal component makes up 33 percent of the map unit. Slopes are 2 to 12 percent. This component is on uplands. The parent material consists of loamy over clayey marine 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 36 inches during January, February, March, April. 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 Susquehanna component makes up 29 percent of the map unit. Slopes are 2 to 12 percent. This component is on coastal plains. The parent material consists of clayey marine deposits. 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 very 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. 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.

Pn

Generated brief soil descriptions are created for major soil components. The Pits is a miscellaneous area.

Pamlico

The Pamlico component makes up 50 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains, flood plains. The parent material consists of organic over sandy alluvium deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 40 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. The Dorovan component makes up 35 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions. The parent material consists

of decomposed organic material. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 50 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. The soil has a slightly sodic horizon within 30 inches of the soil surface.

McLaurin

The McLaurin component makes up 50 percent of the map unit. Slopes are 2 to 12 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 1 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. The Benndale component makes up 35 percent of the map unit. Slopes are 2 to 12 percent. This component is on coastal plains. The parent material consists of sandy loam alluvium 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 4e. This soil does not meet hydric criteria.

GENERAL PROPERTY RECOMMENDATIONS

Forest Protection

A health vigorously 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. Boundary Lines ahould be painted every 5 years.

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.

Invasive Species Control

During the reconnaissance and evaluation of your property several areas of the invasive species Cogongrass (*Imperata* cylindrica) totaling approximately 7 acres were discovered.

This species is a federally listed noxious weed and every effort should be taken to control its spread. Cogongrass is an aggressive, colonizing perenial grass 1 to 6 feet tall that spreads through wind-disperesed seed and grows in full sunlight to partial shade. Aggressively invades right-of-ways, new forest plantations, open forests, old fields, and patures. Also, this grass is highly flammable and a severe fire hazard that burns extremely hot especially during winter.

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.

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: Stands 15, 37, 38, 39, 40

Stand Description

This strata contains 5 stands that total approximately 198 acres. A final harvest was conducted in the spring of 2009. Then that summer a shear and rake site preparation was conducted. In winter of 2009 this strata was planted with containerized Longleaf pine seedlings at an average of 595 seedlings per acre.

Strata Recommendations

It is recommended that this strata have an aerial release application be applied at 2 years of age to free the seedlings of competeting vegetation. Also, this strata should be carried to a full rotation age of 45 years with thinnings occurring at the approximate ages of 20 and 30 depending upon stand growth and density. Prescribed burning should be conducted on a 2 to 3 year rotation once the windrows left from site preparations have decomposed enough that they would not burn too hot to harm the regeneration or burn for an extended period of time.

Activity Recommendations

Stand Improvement

Aerial herbicide application is recommended in between August 15 and October 15 in the 2nd or 3rd year after planting to release the seedlings from competeing vegetation and maximize growth and timber production.

Strata 2: Stand 32

Strata Description

This strata contains one stand of approximately 5 acres. This stand is a mixed pine hardwood of approximately 32 years of age and contains sawtimber to pole sized timber with wet soils. Due to its close proximity to Sportsman's Lake special care should be given when any forest management activities are conducted here to ensure the stability of this stand's ability to control soil run off.

Strata Recommendations

It is recommended that this stand be thinned at the same time as stand 46 to make it more attractive to potential buyers and carried to a full rotation age of 45 years of age.

Activity Recommendations

Forest Health

A prescribed burn should be carried out on this property in the late fall or early winter of 2013 to reduce debris left by the thinning and then continued on a 2-3 year rotation thereafter.

Harvest

A select/marked thinning is scheduled for 2012 depending upon the hunger of the market.

Strata 3: Stand 7

Strata Description

This stand contains approximately 145 acres that was regeneration harvested in FY'98 leaving approximately 10 longleaf pine seed trees per acre for natural regeneration. A

site prep burn was conducted in September of 1992. Adequate natural regeneration was not attained following these activities. Between years 2005-2006, the seed trees were harvested and the site planted with containerized longleaf pine seedlings at an average of 575 seedlings per acre. This strata borders Sportsman's Lake and special precautions should be taken when performing forest management activities with in this strata to ensure the stability of this stand and its ability to control soil run off into the lake.

Strata Recommendations

It is recommended that this strata have a full rotation age of 45 years of age with thinnings occurring at the approximate ages of 20 and 30 years depending upon stand growth and density.

Activity Recommendations

Forest Health

A prescribed burn should be carried out on this property in 2012 and be repeated on a two or three year rotation thereafter.

Harvest

A row/low thinning is scheduled to be preformed within this stand in 2016. This will be an operator select sale where the stand will be thinned to a residual basal area of 70 square feet per acre.

Strata 4: Stands 26,27,28

Strata Description

This strata contains 3 stands that total approximately 8 acres. They were left as SMZ areas at points where drainage enters sportsman's Lake. This was done to help control run off from the surrounding hill sides and decrease the amount of soil that may flow in to the lake.

Stand Recommendations

It is recommended that this stand be allowed to persist in its natural state so that it may help control run off while also providing cover and a variety of browse and hard mast for multiple wildlife species. Harvesting may occur in these areas when the harvesting of adjacent stands is being conducted.

Strata 5: Stands 14,19,23

Strata Description

This strata contains approximately 53 acres of mature mixed pine hardwood poles and sawtimber that has recently had a final harvest conducted.

Strata Recommendations

It is recommended that this strata have a final harvest conducted and return the area to timber production as soon as possible. After site preparation this strata should be planted in longleaf pines with at a rate of 605 to 650 TPA and should be carried to a full rotation age of 45 years of age with thinnings occuring at the approximate ages of 20 and 30 years.

Activity Recommendations

Site Preparation

Heavy mechanical site prep, such as a shearing, raking, and piling or windrowing should be preformed to clear woody debris and facilitate an adequate planting surface.

Stand Improvement

Aerial herbicide application is recommended in between August 1 and October 15 in the 2nd or 3rd year after planting to release the seedlings from competeing vegetation and maximize growth and timber production.

Regeneration

It is recommended that containerized Longleaf Pine be planted at a rate of 605 to 650 trees per acre.

Strata 7: Stands 30,42

Strata Description

This strata is approximately 8 acres of loblolly and longleaf pine mixed hardwood that was left as a buffer around the Gun and Reel Hunting Club's facilities and the County dump site. It is composed of sawtimber size product class timber.

Strata Recommendations

This strata is serving as an aesthitical buffer and should be allowed to persist naturally until adjacent sites are having harvest activities conducted. At that time the mature timber within should be thinned.

Strata 8: Stands 23,31

Strata Description

This strata contains two stands totaling approximately 16 acres. These stands have been set aside as a Streamside Management Zones. Perrenial streams, intermittent streams and drains will be managed in accordance with Mississippi's Best Management Practices.

Stand Recommendations

While conforming to Mississippi's Best Management practices it is recommended that some harvesting activities be preformed on this stand when harvesting in the adjacent stands occur.

Strata 9: Stands 16,41

Strata Description

This strata consists of 2 stands that contain approximately 115 acres of a mixed pine hardwood and is composed of sawtimber size product class timber. These stands have been set aside as an SMZ.

Stand Recommendations

Considering the bottomland compnent within these stands it is recommended that they should be managed following Mississippi Best Management Practices. Harvesting activities should be done when the thinnings of adjacent stands are conducted. Curently the area should be allowed to persist in its natural state there by providing a variety of browse, hard and soft mast and cover that supports a thriving wildlife population of several different species.

Strata 11:Stand 46

Strata Description

This stand is approximately 12 acres in size and contains chip'nsaw to pulpwood sized slash pine timber that was established in 1985.

Strata Recommendations

Considering its small accerage, it is recommended that this stand be thinned when the adjacent stand is thinned. Although this stand is biologically ready for a thinning, current market prices and its smaller size may make it difficult to sell when it is scheduled in 2012.

Activity Recommendations

Harvest

A low and row thinning is scheduled for 2012 depending upon the hunger of the market.

Forest Health

A prescribed burn should be carried out on this property in the late fall or early winter of 2014-2015 to reduce debris left by the thinning and then continued on a 2-3 year rotation thereafter.

OTHER PLAN ACTIVITIES

Boundary Lines

Line Description

Boundary Lines should be painted in fiscal year 2017.

Line Recommendations

It is recommended that the boundary lines be repainted on a 5 year rotation to maintain visibility and accuracy.

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.

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.

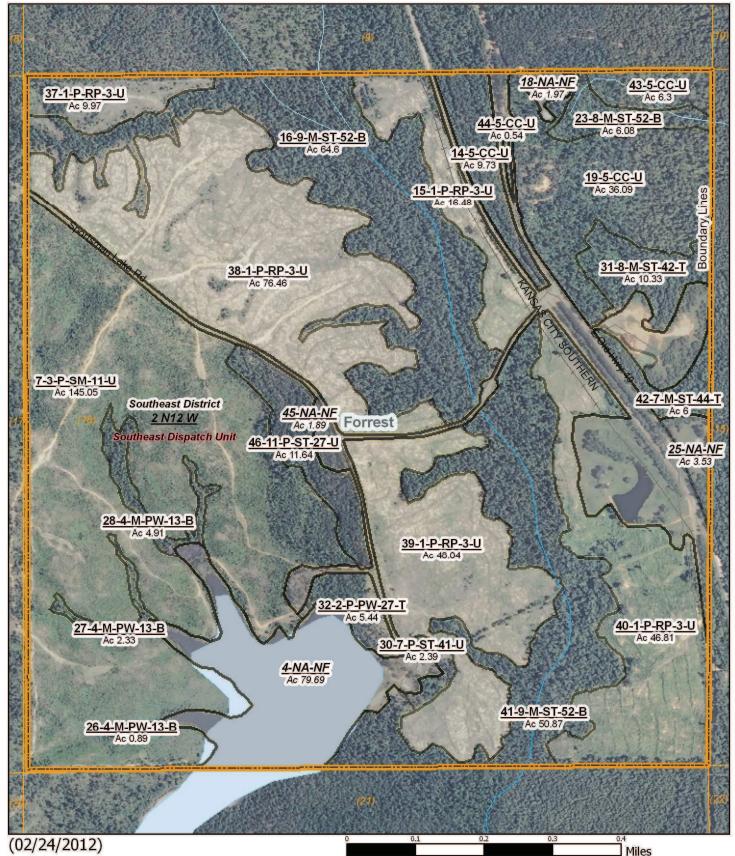
Although this information is derived from sampling estimation techniques with the presumed precision of plus or minus 15 percent sampling error with 95 percent confidence, it is a statistical estimation and not a 100 percent census of the forest resources within the targeted procurement zones. These estimates are subject to change, reflecting changes to the analysis procedures or the data. These estimates are also temporally static. Events and circumstances occurring within the procurement zone that physically alter the forest resource will not be reflected.



Forrest County Schools

16-2N-12W 2012 to 2021 648.04 Acres





16-2N-12W

School Sections



Property Property	Category 1: Stands (cont) Pulpwood	Boundary Lines Property	
Category 1: Stands Sawtimber Sub-Merchantable Reproduction	Category 3: Non-Forest Stands Non-Forest		
MFC Basemap County Boundary County Boundary	Public School Districts FORREST COUNTY SCHOOL DISTRIC	т	Physiographic Region Pine Belt
Quadrangle Grid USGS Quad	US Congressional District US Cong Dist #4		Soil Associations mclaurin-heidel-prentiss
PLS Townships PLS Townships	MS Senate		Surface Geology PASCAGOULA/HATTIESBURG
Survey Districts District 5	MS House		Recreational Facilities Other
Blockgroup (Census 2000) Blockgroup (Census 2000)	Perennial Streams Perennial Streams		USFS Ownership Forest Service
Block (Census 2000) Block (Census 2000)	Intermittent Streams Intermittent Streams		USFS Boundary Desoto
Tract/BNA (Census 2000) Tract/BNA (Census 2000)	Hydrologic Units (Basins) BLACK AND RED CREEKS		MFC Districts MFC Districts
County Roads County Roads	Water Bodies Water Bodies		MFC Dispatch Units MFC Dispatch Units
Active Railroads Active Railroads	Historic Forest Boundary Longleaf Pine with Loblolly Pine-Slash	n Pine	MS Outline MS Outline
School Sections	MS Forest Habitat		

SOUTHERN LOAM HILLS-GENTLE TOPOGRAPHY

Stand Activity Schedule for Forrest Co Board of Education 16 2N 12W

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2012					
2	32	Harvest, Mechanical, Thin, Machine, Loblolly	5	\$50.00	\$1,787.50
11	46	Harvest, Mechanical, Thin, Machine, Loblolly	12	\$120.00	\$4,128.00
		Yearly Totals	17	\$170.00	\$5,915.50
2014					
5	14	Stand Improvement, Chemical, Release, Aerial, Woody Stems	10	\$1,000.00	\$0.00
5	19	Stand Improvement, Chemical, Release, Aerial, Woody Stems	36	\$3,600.00	\$0.00
5	43	Stand Improvement, Chemical, Release, Aerial, Woody Stems	6	\$600.00	\$0.00
5	44	Stand Improvement, Chemical, Release, Aerial, Woody Stems	1	\$100.00	\$0.00
11	46	Forest Health, Other, Burn, Hand, Southern Pine Beetle	12	\$291.00	\$0.00
		Yearly Totals	65	\$5.591.00	\$0.00
2015					
3	7	Forest Health, Other, Burn, Hand, Southern Pine Beetle	145	\$3,625.00	\$0.00
		Yearly Totals	145	\$3.625.00	\$0.00
2016					
2	32	Forest Health, Other, Burn, Hand, Southern Pine Beetle	5	\$125.00	\$0.00
3	7	Harvest, Mechanical, Thin, Machine, Longleaf	145	\$5,075.00	\$44,406.25
		Yearly Totals	150	\$5.200.00	\$44.406.25
2017					
11	46	Forest Health, Other, Burn, Hand, Southern Pine Beetle	12	\$300.00	\$0.00
		Yearly Totals	12	\$300.00	\$0.00
2019					

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2	32	Forest Health, Other, Burn, Hand, Southern Pine Beetle	5	\$125.00	\$0.00
3	7	Forest Health, Other, Burn, Hand, Southern Pine Beetle	145	\$3,625.00	\$0.00
	·	Yearly Totals	150	\$3.750.00	\$0.00
2020					
11	46	Forest Health, Other, Burn, Hand, Southern Pine Beetle	12	\$300.00	\$0.00
	·	Yearly Totals	12	\$300.00	\$0.00
		Grand Totals	551	\$18.936.00	\$50,321.75