

**Department of Agriculture and Consumer Services  
North Carolina Forest Service**

**INVOICE**

<b>REMIT TO</b>		<b>DATE</b>	<b>INVOICE #</b>
North Carolina Forest Service 3314 NC Hwy. 86 South Hillsborough, NC 27278-8711 Voice: 919-732-8105 Fax: 919-732-4005		02/08/2016	7929
		<b>Payment due by: 03/09/2016</b>	
		If you would like to pay on line with a credit card please visit: <a href="https://apps.ncagr.gov/ncfs/FMRT//Paypoint/InvoiceInfo">https://apps.ncagr.gov/ncfs/FMRT//Paypoint/InvoiceInfo</a>	
<b>BILL TO</b>		You will need your invoice # and the following Pin#	
Kara Brewer			
	<b>Account</b>	<b>Terms</b>	<b>County</b>
		30 days	Orange
<b>Service Description</b>	<b>Acres</b>	<b>Rate</b>	<b>Amount</b>
FM Plan (Base Charges)		45.00	45.00
FM Plan (Per Acre Charge)	23.00	3.00	69.00
<p>If there are questions regarding this invoice please contact your District 11 office at: 919-732-8105</p> <p>A \$25.00 processing fee will be charged for returned checks.</p> <p>Per G.S. 147-86.23 interest and penalties will be charged as follows for past due accounts receivable:</p> <p>5% annual interest rate. 10% penalty</p> <p>In addition accounts receivable 60+ days past due will be turned over for collections and collection fees may be assessed.</p>			
Make check payable to N.C. Forest Service. Return one copy of the invoice with check to the above remit to address.		<b>Total Due</b>	<b>114.00</b>
Thank you for your business!			



North Carolina Department of Agriculture  
and Consumer Services  
*N.C. Forest Service*



Steven W. Troxler  
Commissioner

Scott Bissette  
Assistant Commissioner

D11-FM Plan  
Project – Orange County  
Brewer, Kara (35° 55.250' -79° 15.020')  
Total Plan Acres - 23 acres

January 25, 2016  
3314 NC Hwy 86  
Hillsborough, NC 27278

Kara Brewer  
...

Dear Ms. Brewer:

Recently Orange ACR, Justin Bennett, and I visited your wooded tract in Orange County off Millikan and Marrow Mill Roads. The attached Forest Management Plan will present our recommendations to better manage forested areas on the parcels identified above. Supplemental to this plan are enclosures which we will refer to in the plan. These are extra information designed to help you make sound decisions in managing your forest. Please read the plan first then refer to the enclosures for more information. I hope you find the information helpful and that it provides you with enough information to make sound management decisions.

The invoice associated with the preparation of this Forest Management Plan is also enclosed. Please submit **Payment within 30 days to avoid late charges.**

Thank you for your interest in maintaining a healthy and productive forest. The North Carolina Forest Service is dedicated to serving our woodland owners in an effort to keep our "working forests working." If you have any questions concerning this plan please feel free to contact me in Hillsborough at (919) 732-8105, or the Orange County Office at (919) 732-8152.

Sincerely,

C. Clell Britt – RF#1785  
D-11 Service Forester

Cc: District FM File  
Orange County Ranger

Enclosures

- FM Plan with Map
- Invoice
- Timber Tax Website
- Clearcutting: Facts and Myths
- NC Forestry PUV Tax Program
- Portable Sawmill List
- Orange County Consultants List

## **Landowner Objectives**

We understand that your main objectives for this property is to manage for sawtimber production, maintain the health and productivity of your forest, and qualify for the Present-Use-Valuation Tax Program. Managing your forest is a great way to produce supplemental income as well as provide for wildlife habitat. Your investment in forest management will also benefit the local and state economies. This Forest Management Plan will also satisfy one requirement for the PUV Tax Program.

The following Forest Management Plan reflects your objectives and recommendations are made accordingly. The plan describes 2 management areas that can be located from the attached map.

*\*\* Please note that the map is for planning purposes only and the boundary lines and acreages are estimates based on the county GIS data and aerial interpretations. The map or any measurements from the map should not be used for surveying or as legal definitions.\*\**

## **Recommendation Overview**

**Area 1 (19 ac)** – We have given you two (2) management options for this area:

- 1) Clear-cut harvest the area within the next 10 years. After the harvest regenerate the site with hand planted loblolly or shortleaf pine seedlings.
- 2) Selective hand cut ALL the mature pine and hire a portable sawmill to make boards that may be utilized for personal uses either on or off site.

**Area 2 (2 ac)** – We recommend if you clearcut Area 1 to remove the pine from this field and incorporate this area when regenerating Area 1 OR allow the area to grow and manage the pines along with Area 1 for future timber needs.

**Present-Use Valuation Property Tax Program:** You should have a copy of this plan filed with the Orange County Tax Office to benefit from the Present Use Valuation program. There is more information on this below.

## **Current Conditions**

### ***Tract Overview***

The tract is located in south western Orange County off both Morrow Mill Road (to the north) and Millikan Road (to the south). The soils are Georgeville silt loam and Herndon silt loam which are well drained soils whose site indices are between 75 and 86 for loblolly pine at base age 50 years. Site index is a measure of site productivity which is species specific. We would expect a loblolly pine on these soils to be between 75 and 86 feet tall when it is 50 years old. The slopes are between 0-5% across the tract. A look at the National Heritage database did not show any known locations of threatened or endangered plant or animal species within a mile of the tract.

### **Area 1 – Mixed Hardwoods and Pines**

This area is a mixed stand of mature shortleaf and loblolly pines along with younger mixed hardwoods. The pines are concentrated to the north and south ends by the roads and the middle is mostly all hardwoods. The shortleaf and loblolly pines are around 100 years old and range from 8-16 inches in diameter and 80-90 feet tall. These good quality pines are well formed and no disease or insect issues were noticed. The hardwoods consist of red maple, sweetgum, yellow-poplar, white oak, and southern red oak. This mix of mostly undesirable timber species ranges from 4-12 inches in diameter and 60-70 feet tall. The understory of this area consists of hickory, sourwood, southern red oak, red maple, and American beech.

**Recommendations:** Since you plan to use the property for multiple uses, one of which being forestry, and in order to integrate those uses more adequately we have given you two (2) management options. Please choose the one you feel best works with your non-forest uses.

**Option 1:** The best forest use of this area is to clear-cut harvest the whole tract and then regenerate the site with planted loblolly or shortleaf pines. The mature pines will need to be cut soon or they will begin to die naturally. Also southern pines over 50 years old can develop red-heart disease. This is where the center of the tree, the heart-wood, starts to soften and rot, which makes the wood a lot less desirable for sawtimber. If not cut soon the pines that are younger than those aged may start to develop this disease. Most of the area is dominated by red maple and sweetgums which are not the most desirable sawtimber species and the few yellow-poplars and oaks do not have the best form. By clear-cutting the site you can gain the value in the pine before they die and the hardwoods can be cut at the same time to prepare the site for planting a new stand of pines.

When talking with a consulting forester or potential timber buyer ask about the use of a whole tree chipper. The logger can merchandize much of the smaller diameter stems that would not be large enough for pulpwood by chipping them onsite and hauling the chips to local mills. Having a chipper onsite will leave the site cleaner with less logging debris.

After the harvest you will want to have a plan made for regeneration of the site. A regeneration plan should explain what needs to be done to prepare the site, what species to plant, when to plant, and how to plant. A good plan will also explain costs of planting and various cost share programs available. If you do sign up for cost share a plan will be required for approval. Here are a few things to consider about planting:

- Planting in this region costs around \$70-\$80 per acre, but includes seedlings and labor.
- Timing of the harvest and how well the loggers cut the site will affect how you can regenerate the site. If the pines are harvested in the summer you could be able to plant with no site preparation. Harvesting in other times of the year or excessive amounts of logging debris would require more site preparation such as herbicide spraying, burning, or other mechanical operations, each with added costs.
- All of these considerations is why you should have a regeneration plan written.

**NOTE:** One option to regenerate the site is to plant shortleaf pine. Shortleaf pine is a native pine that once dominated much of the upland sites in the Piedmont region. It is a long lived species that grows very straight, with very little taper, which makes great sawtimber. It is also a valuable wildlife species in this region, and is very resistant to native disease and insect infestations. If you chose to clear-cut

the area and regenerate with shortleaf pines please contact us or your consulting forester for a regeneration plan and cost share assistance advice.

**Option 2:** This option might suit better for some of your other land uses. The pine still need to be removed but there is not enough pine sawtimber on the site to attract a buyer without also having the hardwood pulpwood and chips being sold. For this option we recommend you hire a Portable Sawmill to saw the pines into useable boards. This is a growing market in our area and we have enclosed a list of contractors for this work.



Usually these mills are pulled behind a pick-up truck and can be setup on site with very little impact to the area. They will only saw the boards; they will not usually cut the trees down or bring them to the mill site. You will usually have to pay for this service, but the boards could then be used by you for other projects. This would add personal value knowing that the trees for your projects were grown on-site.

These boards can be used for anything you would traditionally buy lumber for, but they will be rough sawn and will need to be planed and dried. You will need a place, such as a shelter for boards to dry before use. **Additionally you will need to check with a building contractor or building inspector before you use these boards in any occupied buildings.**

As for the remaining hardwoods, we recommend you allow this to grow for another 10-15 years. After this time you can reevaluate the site for timber stand improvements. You will want to continue to monitor the hardwoods for signs of disease or insect issues. If you notice any dead or dying tops, or large groups of dead trees, please call us for an inspection to determine problems and recommend any actions needed.

### **Harvesting your timber – Hire a consultant**

We recommend that you hire a private consulting forester to handle timber sales on your property. Consultants work for you, the landowner, to evaluate, prepare, and conduct timber sales. These professionals have the knowledge and experience of the business and the area to get the most out of your timber sale. They will prepare the sale area by identifying any streams that need buffering along with any other areas of special concern. They will conduct surveys of the area for volume estimates, species compositions, and timber values. They will also be around during the harvest and handle any problems that arise. After the sale, some consultants will advise you of the next steps to take. Consultant fees vary but are typically around 5-10% of the sale. A copy of our consultants list that specialize in your area is enclosed with this plan and can also be found on our website at [www.ncforestservice.gov](http://www.ncforestservice.gov).

## **Environmental Concerns with Harvesting**

### ***Forest Practice Guidelines:***

Forest Practice Guidelines (FPGs) are **RULES** that must be followed when performing any forestry activities in the state to protect water quality. This includes harvesting, forest road construction (for the purposes of cut and hauling timber or forest establishment) and site prep and planting. Any intermittent or perennial streams or water bodies (such as lakes or ponds) on your property will need to be protected from sedimentation or erosion.

- Streamside Management Zones (SMZs) should be established on both sides of any perennial streams or water bodies which are wide enough to prevent sediment from entering the streams.
- Minimize the amount of stream crossings used.
- Locate all logging ramps/decks away from any streams.
- No trees should be cut and dropped where it will cross the stream
- The logger should also clean any incidental debris from the streams so not to create a stream obstruction.

More information on these rules can be found in the enclosure, ***NC Forest Practice Guidelines Related to Water Quality***, or at our website at [www.ncforests-service.gov](http://www.ncforests-service.gov) under >Managing Your Forest> Water Quality.

### ***Riparian Buffer Rules for Forest Management Activities:***

Your tract is part of the Cape Fear River Basin and part of the Jordan Lake Water Supply Watershed which has riparian buffer rules that also apply. The timber buyer will need to follow these buffer rules when harvesting your timber. **You must leave a buffer of 50 feet or more on both sides of any stream on the property.** Only certain activities can occur within this buffer. Please discuss with your consultant and timber buyer about locating this buffer before any work begins on your land. You can read more specifics about these buffer rules in the enclosure, *Jordan Lake Water Supply Watershed Buffer Rules*.

### ***Area 2 – Old Field with Mixed Pines***

This area is a small abandoned field to the east of Area 1. The field has been seeded by the surrounding pines with loblolly pine saplings. Currently the pines are a mixed age and are about 2-3 inches in diameter and 10-15 feet tall. The ground cover in this area is all grasses such as bahia, fescue, and ragweed.

**Recommendations:** Since this is such a small area it will be very difficult to manage as is. You will want to lump the management of this area with you management of Area 1. If you decide to clear-cut Area 1, remove the pines in this field and prep the area for planting when you plant Area 1. One easy way to accomplish this is to allow the logger to place their loading ramp here. If you don't clear-cut the area you can allow the pines to grow until the remaining hardwoods are also ready for harvest.

## **Planting Chestnut on your Property**

American chestnut (*Castanea dentate*) was once a dominate tree in the central and western parts of North Carolina and was a main food source for many wildlife species as well as a valuable timber species. In the early 1900's all that changed when the Chestnut Blight, a bark fungus, was accidentally introduced to the forests of North America from Asia. This disease quickly killed most large American chestnut trees and now all that remains are root sprouts and young saplings that rarely ever can grow to the large sizes that they once could. Efforts by some groups, both public and private, have started to breed American chestnut with the blight resistant Chinese chestnut to eventually make a mostly American chestnut hybrid that is blight resistant.

The NC Forest Service, at this time, does not sale any of these hybrids, but the organizations listed below might have some more helpful information and resources. We recommend you contact them for assistance with starting a chestnut orchard on your property.

For the Carolina's Chapter of the American Chestnut Foundation - <http://carolinas-tacf.org/>

For the National chapter of the American Chestnut Foundation - <http://acf.org>

## **Timber Taxation Considerations**

### ***Taxes on the Harvest***

The sale of your timber is considered income for the year that you get paid. This payment will be taxed as income. There are ways to reduce this tax liability by establishing a "timber basis." A "timber basis" is a way to reduce the amount which can be taxed based on the value of the land and the timber when you bought the land. Many consultants can help you establish your basis and help you through the steps. We would recommend that you contact your accountant or CPA to determine your tax liability. Here are some more helpful hints to consider:

- Talk with your accountant or CPA
- Visit the National Timber Tax website: [www.timbertax.org](http://www.timbertax.org)
- Read the attached handout "Tax Tips for 2014" for an idea of what could occur in the future
- Visit the NC State University Extension Forestry Website for more publications on Economics, Taxation, and Estate Planning: [www.ces.ncsu.edu/forestry](http://www.ces.ncsu.edu/forestry)

## **Forestry Present Use Valuation Program**

The Forestry Present Use Valuation Program can save you money on your property taxes. This program is designed to reduce the taxes landowners pay to the county by taxing your property based on the current use of your land rather than the highest taxable value. To qualify you will need at least 20 acres of contiguous forestland and a management plan filed with the county tax office. Also to qualify, the property has to either be your primary residence, or you must have owned the property for 4 years. **Note:** If you enter this program and then are removed from the program for not maintaining 20 acres of woodland, or not following the filed plan you will be required by the tax office to pay back taxes while you were in the program for the previous 3 years.

We have enclosed some literature on this valuable, money saving program. If you are not already in this program, please contact the Orange County Tax Office and complete an application. You will need to provide them a copy of your FM Plan for your property when you submit the application.

- Orange County Tax office: Phone – (919)732-8181  
Site: <http://orangecountync.gov/departments/tax/index.php>

## **Conclusion**

Thank you for the opportunity to walk your property and getting our professional advice on management options. With good management your woodland can be very productive and provide many opportunities for wildlife habitat and recreation for you, your family, and your neighbors now and in the future.

## **Questions?**

For questions about this plan or any future forestry projects please contact your Orange County Forestry Office at (336) 694-6131 or me at (919) 732-8105. Thank for managing you forests responsibly and sustainably.





# North Carolina Forest Service Woodland Management Map

Boundaries and Acreages are Approximate



Landowner: **Kara Brewer**  
 County: **Orange**  
 Latitude: **35° 55.250'**  
 Longitude: **-79° 15.020'**  
 Drawn By: **C Clell Britt**  
 Date: **1/26/15**  
 RiverBasin: **Cape Fear**  
  
 2014 Photography

**Stand Descriptions:**  
**1 - 19 ac - Natural Mixed Hardwoods**  
**2 - 2 ac - Planted Loblolly Pine**

**Legend**

- Roads
- Streams
- Stands**
- Stands
- Land owner tract

Business Name

County: Orange

Owner Kara Brewer

Lat: 35 55.250

Long: 79 15.020

Address

Phone:

Phone:

City, State, Zip:

Email:

Exam By:

C Britt + J. Bennett

Date: 1/7/16

Objectives:

Forest present use value (PUV), Forest Products (Timber), Forest Products (Non-Timber), Chestnut Plantation,

	Area	1	Acres	19	Area	2	Acres	2	Recommended Treatments, or Notes, Remarks: (harvest schedule, B/A to cut or leave, reforestation, TSI, burning, etc) Area: 1 <u>options</u> ① CC all - plant in Loblolly  ② use portable sawmill to utilize the pine sawtimber - use wood for own purposes.	
Stand Description: (species, origin, cutting history, etc.)	Natural Mixed HW/Pine SL Pine, VA Pine, Loblolly, Maple, poplar, oak, SRW				old field grown in young Loblolly					
Age & Growth Rate	SLP 104yo 16pp: 14" 83'				~ 8yo					
Diameter Range	8-16 Pine 4-12 HW				2-3"					
Hgt of Dominants	81-91'				10-15'					
Site Index (species/ base age)	75-86 Loblolly pine @ 50yrs.				same as Area 1					
Basal Area Range	Pulpwood	Sawtimber	Unmktable	Pulpwood	Sawtimber	Unmktable				
Pine	30-40	90-100	—	—	—	50-60				
Hardwood	50-60	10-20	—	—	—	—				
Volume Range	Pulpwood			Sawtimber			Pulpwood			Area: 2. - remove pine - combine w/ Area 1 when regenerated.
Pine	15-16 cord/ac.			16-18 mbf/ac.			—			
Hardwood	18-20 cord/ac.			1-2 mbf/ac.			—			
Stand Quality: (damage, insects, disease, defects, etc.)	Good quality Pine sawtimber Poor quality HW				No insect or disease issues.					
Mid & Understory Description	hickory, sawwood, SRW, maple, beech				grasses, bahia + fescue Regrowth.					
Reproduction (species, amount)	none				none					
Site Description: (soil, slope, aspect, drainage, etc.)	Georgville silt loam Herndon silt loam 0-5% slope				Same as Area 1					
BMP's, Special Concerns And Notes	Days since logging completed <u>NA</u> Compliance? FPG <u>/</u> Buffer Rule <u>/</u>  Cape Fear/JL				Days since logging completed <u>NA</u> Compliance? FPG <u>/</u> Buffer Rule <u>/</u>					

NC DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES,  
NC FOREST SERVICE

Tract Location: Orange County  
Lat. Long.

### AGREEMENT FOR WOODLAND PLAN SERVICES

This agreement is made and entered into this 3rd day of December, 2015, by and between:

Kara Brewer; of

Telephone:

herein called the "Landowner" and the North Carolina Department of Agriculture and Consumer Services, North Carolina Forest Service, herein called "NC Forest Service".

**WITNESSETH THAT:** The NC Forest Service hereby agrees to provide the said Landowner services for the purpose of preparing a FM Plan subject to the following terms and conditions:

#### **A THE LANDOWNER AGREES TO:**

- 1 Pay the NC Forest Service the base charge of \$45.00 plus \$3.00 per acre for approximately 22 acres. Total estimated amount due will be \$111.00. This acreage figure is only an estimate. For purposes of calculating the final invoice, acreage will be determined by the NC Forest Service as outlined in section B.3 below and may vary from this estimate.
- 2 Make full payment payable to "NC Forest Service" upon receipt of the woodland plan invoice.
- 3 Advise the NC Forest Service of property boundaries; property improvements (i.e. ditches, fences, outbuildings, etc.) that may warrant special consideration; and known or potential hazards.
- 4 Provide the NC Forest Service access to the property in order to gather field data.
- 5 Advise the NC Forest Service of any known threatened or endangered species located within the perimeter of the property.
- 6 Advise the NC Forest Service of short and long-term management objectives.

#### **B THE NC FOREST SERVICE AGREES TO:**

- 1 Present the landowner with a completed woodland plan and map tailored to the Landowner's management objectives.
- 2 Address, as appropriate, the following elements within the woodland plan:
  - a. Summary of landowner objectives
  - b. Description of areas addressed by the woodland plan and their condition. Information will be based on measurements and observations noted during the field exam.
  - c. Management recommendations for each area addressed, including:
    - recommended forestry practices and activities
    - timeline to conduct practices and activities
    - estimated costs
    - available cost-share programs
    - lists of applicable service providers and contractors
  - d. Multiple-use or non-timber benefits
    - will consider recreation, wildlife, aesthetics, cultural, and archeological resources as appropriate
  - e. Environmental protection measures
    - related to silvicultural recommendations
    - address concerns related to soil, water quality, fire control, smoke management, threatened & endangered species, cultural resources, etc.
  - f. Financial analysis and tax information
    - financial analysis may be used to identify the most cost effective option based upon the Landowner's management objectives
    - tax information to include North Carolina's Forestry Present Use Value (PUV) tax program and other possible tax-saving options
  - g. Woodland plan map
    - indicates applicable stand/tract boundaries, north orientation, scale, timber types, mapping method, water resources, access roads, and other important features
- 3 Determine the number of acres addressed by the woodland plan. NC Forest Service will utilize geographic information system (GIS) software, county GIS tax parcel data, or other available resources to determine acres addressed within the woodland plan. This does not mean these woodland plan acres have been measured "on the ground". This acreage figure should not be considered "survey grade". It is intended to be utilized for woodland plan invoicing as well as general planning purposes. Acreages on NC Forest Service woodland plan contracts and invoices may or may not match later measurements associated with practices that have been or may be implemented (ex. areas planted with trees).
- 4 Invoice the Landowner when the completed woodland plan is sent to the Landowner.

#### **C THE LANDOWNER AND NC FOREST SERVICE AGREE THAT:**

- 1 If fieldwork on the agreed-upon project has not commenced, then either party may cancel this agreement by giving two weeks written notice to the other party.
- 2 Woodland plans written by the NC Forest Service will not contain "timber cruise data" that provides an inventory of timber on the property, nor will they contain specific financial values related to existing timber or non-timber products. Landowners seeking this type of information for harvesting purposes will likely need to coordinate with private service providers.
- 3 The NC Forest Service will not represent the Landowner or Landowner's agent in the sale or marketing of timber or non-timber products.
- 4 The decision of the NC Forest Service's designated representative will be final in all disputed matters arising from this agreement.
- 5 Terms of payment: **PAYMENT IS DUE UPON RECEIPT OF INVOICE.** Charges not paid by the Landowner within 30 days of the invoice date will incur an interest charge at the rate set by the Secretary of the Department of Revenue and a 10% late penalty against the unpaid balance. Charges not paid within ninety (90) days of the invoice date will be referred to the Attorney General's Office for collection.

Landowner/Agent  
Name: (printed)

Landowner/Agent  
Name: (signature)

NC Forest Service Rep. Name:  
(printed)

NC Forest Service Rep. Name:  
(signature)

Title (if applicable):

Date:

Title:

Date:

F. Justin Bennett

Orange Co. ACR

12/3/15

12/15/15