



# NC Division of Forest Resources

## Woodland Management Map




Acreages and Boundaries are Approximate



1 inch = 660 feet

Landowner: William Callow  
County: Craven  
Location: BSP=65-7-20  
Date: 9-17-01  
Drawn By: Greg Hicks

-  Structure
-  Water Course
-  Trail
-  Hardwood Area
-  Paved Road
-  Pine Area

Date 1-30-02

Tree planting bill for Bill Callow

Acres 17.5 ~~loblolly~~

5.1 willow oak

Spacing 7x12

12x12

Price per Acre \$ 72

\$ 155

Total Labor and Trees \$ 1260

\$ 790.50

total \$ 2050.50

Nancy Lindsey  
Jeff Scholl  
3970 Ayden Golf Club Road  
Ayden, NC 28513  
252-746-2018

Please make check payable to Nancy.  
thanks



North Carolina  
Department of Environment and  
Natural Resources

Michael F. Easley, Governor  
William G. Ross Jr., Secretary



North Carolina  
Division of Forest Resources

Stanford M. Adams, Director

3810 M. L. King, Jr. Boulevard  
New Bern, NC 28562-2236  
September 17, 2001

D-4 FM  
Project (CREP 1479)  
Callow, William—35-7-20 (35-23.25/77-08.17)

Mr. William Callow  
843 CC Road  
Vanceboro, NC 28586-7406

Dear Mr. Callow:

On August 1, 2001, Assistant Craven County Ranger Kim Arrington and I examined the field areas you have enrolled in the North Carolina Conservation Reserve Enhancement Program (CREP). The Conservation Reserve Enhancement Program requires that a "Tree Planting Plan" be prepared by the N.C. Division of Forest Resources for each planting project. Given below are my recommendations for planting the eligible field areas to reduce sediment, nutrient, and other nonpoint source impacts to nearby water systems. The recommendations are based on the CREP Handbook Guidelines, June 2000, for Practice CP22—Riparian Forest Buffer; and the N.C. Natural Resources Conservation Service Practice Standard for practice code 391, Riparian Forest Buffer; and clarification of the Riparian Forest Buffer Standard from CREP meetings Assistant District Forester Steve Whitemore attended on February 11, 2000 and August 16, 2000.

#### Site Locations

The areas we examined are 4 fields located on your farm, Farm Service Agency Tract Number 21479. This farm is located off State Road 1130, north of Vanceboro in the northwestern portion of Craven County, North Carolina. The specific eligible fields are Field 1 (5.4 acres), Field 2 (2.7 acres), Field 3 (4.9 acres), and Field 4 (9.6 acres).

#### Site Description

These fields have been left out of rotation for a year and is grown up with annual weeds and grasses such as dogfennel, horseweed, and fireweed. The predominant soil types are Rains fine sandy loam that's poorly drained and Lynchburg fine sandy loam that's somewhat poorly drained. Most of the vegetation on the site is over head high.

### Site Preparation

This area should be mowed with a bushhog to remove the annual vegetation on the site. Debris from mowing should stabilize the area until the area can be planted. Mowing can be done at any time after the first frost this fall or winter before planting.

### Planting Specifications

Planting Riparian Forest Buffers under the Conservation Reserve Enhancement Program requires that at least two species be planted or regenerated naturally. An area at least 15 feet wide from the edge of the waterway (identified as Buffer) must be planted or naturally regenerated with hardwoods. The remaining area must be regenerated with a species suitable for the site.

To meet the above criteria, I recommend planting two rows of hardwoods along drainages and waterbodies. The first row should be planted 12 feet from the drainage and the second row 24 feet from the drainage. Natural hardwoods should also be allowed to regenerate in this hardwood area to provide a variety of hardwood species. The areas to be planted with hardwoods are around 5.1 acres and are shown as "Hardwood Area" on the enclosed map. The remaining 17.5 acres enrolled in the Conservation Reserve Enhancement Program can be machine or hand planted with either containerized or bare-root longleaf pine seedlings or loblolly pine seedlings. The areas to be planted with pine are shown as "Pine Area" on the enclosed map.

Hardwoods suitable for planting are water oak, swamp chestnut oak, willow oak, sweetgum, blackgum, white oak, southern red oak, and red maple. Seedlings used should be from a local seed source. **Mountain seed source is not appropriate for Craven County.** If planting multiple hardwood species, each species should be planted together in a group to reduce competition between species. The hardwoods should be planted on an approximate 12' x 12' spacing. This will result in around 300 seedlings per acre being planted. The seedlings should be planted between January 1, 2002 and April 15, 2002.

In the past, we have not been real successful with hardwood planting for forestry purposes. Planted hardwoods are slow to get established and often they are out-competed by natural vegetation. To improve survival, you may wish to place solid tube tree protectors around the hardwoods during the planting process. This will allow herbicides to be used in the future to control vegetation around the planted seedlings. If using tree protectors, each protector must be anchored with two stakes placed 180 degrees apart on the tube wall to prevent the tube from rotating.

Longleaf pine is harder to get established than most other pines. Usually after planting, longleaf pine stays in a "grass stage" and does not initiate height growth for several years. Once established and growing, however, longleaf pine is very desirable due to its resistance to most diseases, resistance to fire damage, good consistent growth for many years, wildlife benefits, and its potential for straw production. To improve the chances of successful longleaf pine establishment; either containerized seedling should be hand planted or bare-root seedlings should be machine planted. If using containerized longleaf seedlings, planting should be conducted in

November and/or December. If machine planting bare-root seedlings, planting should be conducted in December and/or January. No-matter which type of longleaf seedlings you use; they must be from a North Carolina Coastal seed source. They should also be planted on rows approximately 12 feet apart and approximately seven feet apart within each row. This approximate 7' x 12' spacing will result in around 518 trees per acre being planted.

This area is also suitable for loblolly pine. Loblolly pine can be hand planted and should be done from January 1, 2002 to April 15, 2002. Loblolly pines can be planted on the same spacing as stated above for the longleaf pine and should come from a North Carolina Coastal seed source. Loblolly pine is easier to get established than longleaf but it is not as disease resistant.

Hardwood, longleaf, and loblolly pine planting must be performed to N.C. Division of Forest Resources Standards to receive cost-share assistance. These standards include proper handling and storing of seedlings prior to planting, as well as proper planting of the seedlings. Due to large root systems, proper planting of hardwoods requires use of a shovel or tool that can make a large hole. Loblolly and containerized longleaf pines can be planted with a planting dibble bar. Most contractors who do tree planting are familiar with our standards. We suggest landowners have a written contract that requires the entire planting operation to meet N.C. Division of Forest Resources standards prior to paying the contractor. Either you or the planting contractor should notify the N.C. Division of Forest Resources prior to the beginning of the tree planting operation so we can inspect the work while it is being done.

Enclosed to assist you with obtaining a contractor are two information sheets, "District Four Tree Planting Contractors," and "Suggested Provisions for Tree Planting Contracts." As hardwood seedlings are usually in short supply, I suggest you go ahead and contact a tree planter about obtaining seedlings. Enclosed is a "Seedling Catalog." The Seedling Catalog lists 2001-2002 seedling prices. Due the time of the year, it is most likely that all longleaf seedlings are already sold out. All the nurseries have been sold out for some time now. There may be a chance that some tree planting contractors still have seedlings that area not obligated. However, if all of the seedlings are obligated then planting of longleaf pine will need to be postponed until next planting season.

#### Estimation of Planting Costs

The cost of planting genetically improved longleaf pine seedlings usually ranges \$110 to \$135 per acre. Cost of planting loblolly pine should be around \$70 to \$80 per acre. This includes the cost of seedlings. The cost for planting hardwood seedlings should range from \$150 to \$170 per acre. If you choose to use tree protectors, the cost for installing tree protectors should be around \$300 per acre. Actual costs for tree planting work may be different, as tree planting is done by private contractors who price the job prior to starting work.

#### Maintenance of Planted Areas

The planted areas should be reexamined after one complete growing season to determine if satisfactory stands have been established. For the pine areas, a minimum of approximately 200

to 300 fairly well distributed seedlings per acre will represent a satisfactory stand. The seedling survival examination will be done by the N.C. Division of Forest Resources.

A requirement of the Conservation Reserve Enhancement Program is that the cost-share practices be maintained for the life of the contract. The planted pine stands will require thinning at least once and possibly twice during the 30-year contract. During this period planted seedlings must be protected from destructive fire, grazing, land clearing, or any other destructive action. Thinnings are needed to open up overcrowded stands and improve the growth and health of the residual trees. The pine areas should be examined for a first thinning when the pines are between 15 and 20 years of age. The basal area after the first thinning should be between 60 and 70 square feet per acre. Thinning or cutting of the pines within the 50 feet "no-cut" zone is permitted only if necessary to maintain the health of individual trees.

As mentioned earlier, planted hardwoods are hard to get established. The final stand will probably be a mix of planted hardwoods, natural sweetgums, and natural red maples. Although not a required maintenance practice, to improve the chances of planted hardwoods getting established, you may wish to periodically release the planted hardwoods from natural competition. If tree protectors are used, this can be accomplished using a herbicide and backpack applicator to spray around but not on the sensitive hardwood trees. This may need to be done in early spring and in the summer during the first three years after planting. All herbicides used must be federally, state, and locally registered; applied according to the label; and recommended according to the enclosed hardwood Herbicide Application Plan (HAP) or an amendment to this plan. Mowing between planted hardwood rows to reduce competition should not be done so that natural hardwoods can help regenerate this area.

If you decide to go with longleaf, they will most definitely need a herbicide spray release in summer during the first few years after planting. This site is not the best soil type for planting longleaf. The soil types are very fertile for this area which, increases the competition on planted longleaf pine. Longleaf pine is very sensitive to competition because it stays in a grass stage the first few years of its life. The herbicide used would be different from the hardwood release herbicide (refer to Pine Release Herbicide Application Plan). Mowing between planted rows to reduce competition may also be applicable during the first three years after planting. For wildlife purposes the minimum mowing height should be 12 inches so that cover is always available. Mowing should not be done between April 1<sup>st</sup> and September 15<sup>th</sup> as this is the breeding and brood-rearing season for ground-nesting species. It may also be feasible to winter burn the pine area several times during the 30-year contract to reduce unwanted competition. If burning is conducted, it should be done according to a "Prescribed Burning Plan" prepared by a certified burn boss.

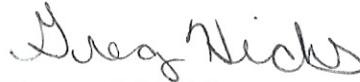
Mr. William Callow

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September 17, 2001

If you have any questions concerning the Conservation Reserve Enhancement Program, you should contact District Conservationist Andy Metts at 252-637-2547. If you have any questions concerning the tree planting guide outlined above, feel free to call Craven County Ranger Jim Hines at 252-244-0295 or me at 252-514-4764. We look forward to working with you on this project.

Sincerely,



Gregory M. Hicks  
Service Forester  
N.C. Registered Forester #1431

GH:CJ

Enclosures

cc: Andy Metts, Natural Resources Conservation Service  
Jim Hines, Craven County Ranger  
Debra McCoy, Craven/Carteret Farm Service Agency

**Part II HERBICIDE PRESCRIPTION**

Prepared By: Gregory M. Hicks Date: 9-17-01

Herbicide: Arsenal Applicator Concentrate

Rate/Ac of Herbicide: 4-6 oz. per acre of Arsenal

Carrier: Water

Spray Vol/Ac: 20 to 30 gallons per acre

Adjuvant: none

Rate/Ac of Adjuvant:

Application Method:  Aerial (Must be approved by Regional Forester or their representative)

Ground Type of Ground Application:

Dates of Application (timing): June 15, 2002 to July 15, 2002 when and if needed

Additional Information: band spray a strip 5 feet wide over the top of each row

Approved By: *Keli Olsen* Date: 9-17-01

**Part III PREPARATION FOR APPLICATION (Initial and date when completed)**

Boundaries determined & suitably designated:

Acreage determined prior to treatment:

Notification of all residents living within 500 feet of target area (aerial application):

Check labeling & target area for Endangered Species Requirements:

Special Problem Areas Considered:

**Part IV APPLICATION RECORD (Obtain Aerial Applicators Record & Attach)**

Observed By:

Date:

Ac. Treated:

Application Method:

Contractor:

Boom Type:

Type Nozzle Tips:

No. of Nozzles:

Appl. Ht.:

Appl. Speed:

Boom Pressure:

Swath Width:

Direction Spraying Progressed (N-S, etc.):

Broadcast rate/ac.:

Total Vol. Sprayed/ac.:

Other (injection spacing, etc.):

Remarks:

Conditions: Soil Moisture:  wet  moist  dry  very dry

Weed Species:  drought stress  fall colors  insect or disease damage  dew

Weather:

Time of Day:

R.H. %:

Temp.:

Wind Speed:

Wind Dir.:

Cloud Cover %:

Fog:

Rainfall (dates & amounts): Before Application:

After Application:

If Restricted Use Pesticide: EPA Reg. #

**Part V POST TREATMENT EVALUATION**

Satisfactory  Unsatisfactory - explain why

Evaluated By:

Date:

2nd Evaluation (if needed):  Satisfactory  Unsatisfactory - explain why

Evaluated By:

Date:



DIVISION OF FOREST RESOURCES

4211-1 (8-96)

**HERBICIDE APPLICATION PLAN**

**Agent:**

**Phone #:**

**District: 4**

**Landowner:** William Callow

**Address:** 843 CC Road; Vanceboro, NC 28586

**County:** Craven

**Photo No.**

**BK 95 SQ 7 PT 20**

**Est. Ac. 17.5**

The objective is to control approximately 80% of the weed species for: Herbaceous Weed Control

**Part I SITE ANALYSIS:** (Authorized FM Rep making prescription)

**VEGETATION** (List weed species by order of importance)

Weed Species	%	#/Ac.	BA	Ht.	DBH	Remarks
annual weeds	80					
grasses	20					

**If Release:**

Crop Species	Tree/Ac.	Ht.	DBH	Age	Planting Date	Condition/vigor (Drought, insects, etc.)
Longleaf Pine	300-500	1 ft.	NA		2000-2001	

**Plantation** Spacing: 7 x 12 foot Site Prep. Method & Date:

**SOILS**

mineral Texture of topsoil: Topsoil Thickness:

Water table: low Drainage needed: no Drainage class: mod. well

Erosion status: slight

Percent Slopes: Aspect(s):

**SENSITIVE AREAS** (Check all that apply and locate all sensitive areas on the map to be attached to this plan.)

- |   |             |     |   |             |     |
|---|-------------|-----|---|-------------|-----|
| <input type="checkbox"/> Municipal W/S    | Buffer size | ft. | <input type="checkbox"/> Residences         | Buffer size | ft. |
| <input type="checkbox"/> Ponds/Lakes      | Buffer size | ft. | <input type="checkbox"/> Businesses         | Buffer size | ft. |
| <input type="checkbox"/> Drainage/Streams | Buffer size | ft. | <input type="checkbox"/> Schools/Churches   | Buffer size | ft. |
| <input type="checkbox"/> Agric. Crops     | Buffer size | ft. | <input type="checkbox"/> Nurseries/Orchards | Buffer size | ft. |
| <input type="checkbox"/> Poultry/Animals  | Buffer size | ft. | <input type="checkbox"/> Bees (Apiaries)    | Buffer size | ft. |
| <input type="checkbox"/> Other            | Buffer size | ft. | <input type="checkbox"/> Roads/Hwys.        | Buffer size | ft. |

Remarks or Special problems: No buffers required for ground application.

**Part II HERBICIDE PRESCRIPTION**

Prepared By: Gregory M. Hicks Date: 9-17-01

Herbicide: Accord

Rate/Ac of Herbicide: 2% by volume or 7 oz for each gallons of mix

Carrier: water Spray Vol/Ac: N/A

Adjuvant: Surfactant 80% Rate/Ac of Adjuvant: .5% by volume or 2 oz for each gallons mix

Application Method:  Aerial (Must be approved by Regional Forester or their representative)

Ground Type of Ground Application:

Dates of Application (timing): 3-1-2002 to 5-1-2002 to 6-1-2002 to 8-1-2002

Additional Information: spray may be needed each year from 2002-2004, twice a year, in these time windows.

spray to kill vegetation within 3 ft. of each tree to be released. don't let spray contact trees to be released.

Approved By: *Keli Colner* Date: 9-17-01

**Part III PREPARATION FOR APPLICATION (Initial and date when completed)**

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Acreage determined prior to treatment:

Notification of all residents living within 500 feet of target area (aerial application):

Check labeling & target area for Endangered Species Requirements:

Special Problem Areas Considered:

**Part IV APPLICATION RECORD (Obtain Aerial Applicators Record & Attach)**

Observed By: \_\_\_\_\_ Date: \_\_\_\_\_ Ac: Treated: \_\_\_\_\_  
Application Method: \_\_\_\_\_ Contractor: \_\_\_\_\_ Boom Type: \_\_\_\_\_  
Type Nozzle Tips: \_\_\_\_\_ No. of Nozzles: \_\_\_\_\_ Appl. Ht: \_\_\_\_\_  
Appl. Speed: \_\_\_\_\_ Boom Pressure: \_\_\_\_\_ Swath Width: \_\_\_\_\_  
Direction Spraying Progressed (N-S, etc.): \_\_\_\_\_ Broadcast rate/ac.: \_\_\_\_\_  
Total Vol. Sprayed/ac.: \_\_\_\_\_ Other (injection spacing, etc.): \_\_\_\_\_  
Remarks: \_\_\_\_\_

Conditions: Soil Moisture:  wet  moist  dry  very dry

Weed Species:  drought stress  fall colors  insect or disease damage  dew

Weather: \_\_\_\_\_ Time of Day: \_\_\_\_\_ R.H. %: \_\_\_\_\_ Temp.: \_\_\_\_\_

Wind Speed: \_\_\_\_\_ Wind Dir.: \_\_\_\_\_ Cloud Cover %: \_\_\_\_\_ Fog: \_\_\_\_\_

Rainfall (dates & amounts): Before Application: \_\_\_\_\_

After Application: \_\_\_\_\_

If Restricted Use Pesticide: EPA Reg. # \_\_\_\_\_

**Part V POST TREATMENT EVALUATION**

Satisfactory  Unsatisfactory - explain why

Evaluated By: \_\_\_\_\_ Date: \_\_\_\_\_

2nd Evaluation (if needed):  Satisfactory  Unsatisfactory - explain why

Evaluated By: \_\_\_\_\_ Date: \_\_\_\_\_

DIVISION OF FOREST RESOURCES

4211-1 (8-96)

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If Release:

Crop Species	Tree/Ac.	Ht.	DBH	Age	Planting Date	Condition/vigor (Drought, insects, etc.)
Mixed Hardwoods	200-300	1 ft.	n/a.	1	2001-2002	

Natural Spacing: Site Prep/Method & Date:

SOILS

mineral Texture of topsoil: Topsoil Thickness:

Water table: low Drainage needed: no Drainage class: well

Erosion status: slight

Percent Slopes: Aspect(s):

SENSITIVE AREAS (Check all that apply and locate all sensitive areas on the map to be attached to this plan.)

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| <input type="checkbox"/> Other            | Buffer size | ft. | <input type="checkbox"/> Roads/Hwys.        | Buffer size | ft. |

Remarks or Special problems: