

Forest Management Specialists

FOREST MANAGEMENT PLAN

PHYTOBIOTICS NORTH AMERICA LLC

FRANKLIN COUNTY
NORTH CAROLINA

MARCH 7, 2019

Prepared by:

Forest Management Specialists

Fred W. Harris N.C.R.F. #1159

And

Charles M. Davis, Jr. N.C.R.F. # 755

Forest Management Specialists

105 N. Church St.
P.O. Box 562
Louisburg, N.C. 27549
(919)496-3797
Fax(919)496-5157
March 7, 2019

Phytobiotics North America LLC
202 New Edition Ct.
Cary, NC 27519

Dear Mr. King & Mr. Roth,

Enclosed, please find the timber management plan on your property that contains 112.91+/- acres that you own in the Sandy Creek Township in Franklin County, North Carolina.

TRACT LOCATIONS and DESCRIPTIONS

The tract is located in Franklin County on the east side of Person Road (SR 1433) at the end of Solar Way. The tract is further described in Deed Book 2169, pages 2138 to 2140. The parcel ID numbers for this tract are 011820, 011821, 011819, and 038110.

See attached maps for more details and location.

You have indicated that you are interested in managing the timber growing on the property. You have also requested a management plan designed to manage the timber and the future economic value of the timber. With that in mind, we have examined the tract and have made the following observations and recommendations. This plan will be filed with the Franklin County Tax Office to continue the participation of this tract in the Forestry Present Use Property Tax Program.

ACCESS

Access is from Person Road and Solar Way.

PRESENT TRACT and STAND CONDITIONS

The total tract area is 112.91+/- net acres. Of the 112.91+/- acres, 103.1+/- acres are in growing timber. The remaining acres are in fields and building sites. The 103.1+/- acres of timber are in two manageable stands as shown on attached map.

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Stand 1 (79.9+/- Acres)

This stand was clear cut in the winter of 2000/2001 and was planted shortly after the harvest in loblolly pine. A large amount of pines naturally seeded this area making it extremely overstocked. This stand was pre-commercially thinned in November/December 2010 to bring the stocking down to 400 to 500 trees per acre which is ideal. This stand of loblolly pine is presently 18 years old. The hardwood species present are sweetgum, red oak, poplar, black cherry, holly, elm, sourwood, wax myrtle, and maple.

The stocking in this stand is approximately 512+/- trees per acre. The average diameter of this stand is 6.0 inches.

Stand 2 (23.2+/- Acres)

This stand is a 50+/- year old mixed bottomland hardwood. The hardwood species present are mainly poplar, maple, sweetgum.

The stocking in this stand is approximately 95+/- trees per acre. The average diameter of this stand is 10.0 inches.

The average site index for the entire tract is 87 for loblolly pine. (See attached soil map and soil productivity map)

The soils in this tract consist of Chewacla and Wehadkee, and Wedowee sandy loam.

Chewacla and Wehadkee soils are somewhat poorly drained with moderately high to high permeability.

Wedowee sandy loam soils are well drained with moderately high to high permeability.

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RECOMMENDATIONS

Stand 1 (79.9+/- Acres)

Continue to let this stand grow and reexamine in 3 to 4 years to determine if it is ready for a pulpwood thinning.

Stand 2 (23.2+/- Acres)

This stand is a stream management zone therefore no harvesting should be done in this area so that the water quality is protected.

NOTE

The harvest dates should not be "written in stone". The dates given are basic guidelines but certain circumstances such as depressed markets may warrant slight variations in the harvest timetable.

NOTE

These stands will be in need of periodic examinations to check for storm damage and disease and pest infestations. If this is desirable to you, these examinations can be performed by this office once a year and a report sent to you concerning the condition of the stand along with any recommendations on issues that might need to be addressed. If you observe any changes in the health of this stand between the times of these examinations, please contact this office for additional examinations and recommendations.

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WATER QUALITY

This tract is in the Tar Pamlico River Basin and the Riparian Buffer Protection Rules apply. Before any forestry activity occurs on the property, Stream Management Zones (SMZ's) will need to be marked and protected along all streams and ponds present on the tract to protect the water quality of the streams. SMZ's extend 50' out from the stream banks on both sides of the stream. Forest Practices Guidelines (FPG's) and North Carolina Forest Service Best Management Practices for water quality will need to be observed during any forestry activity.

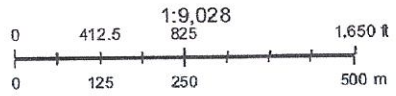
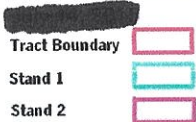
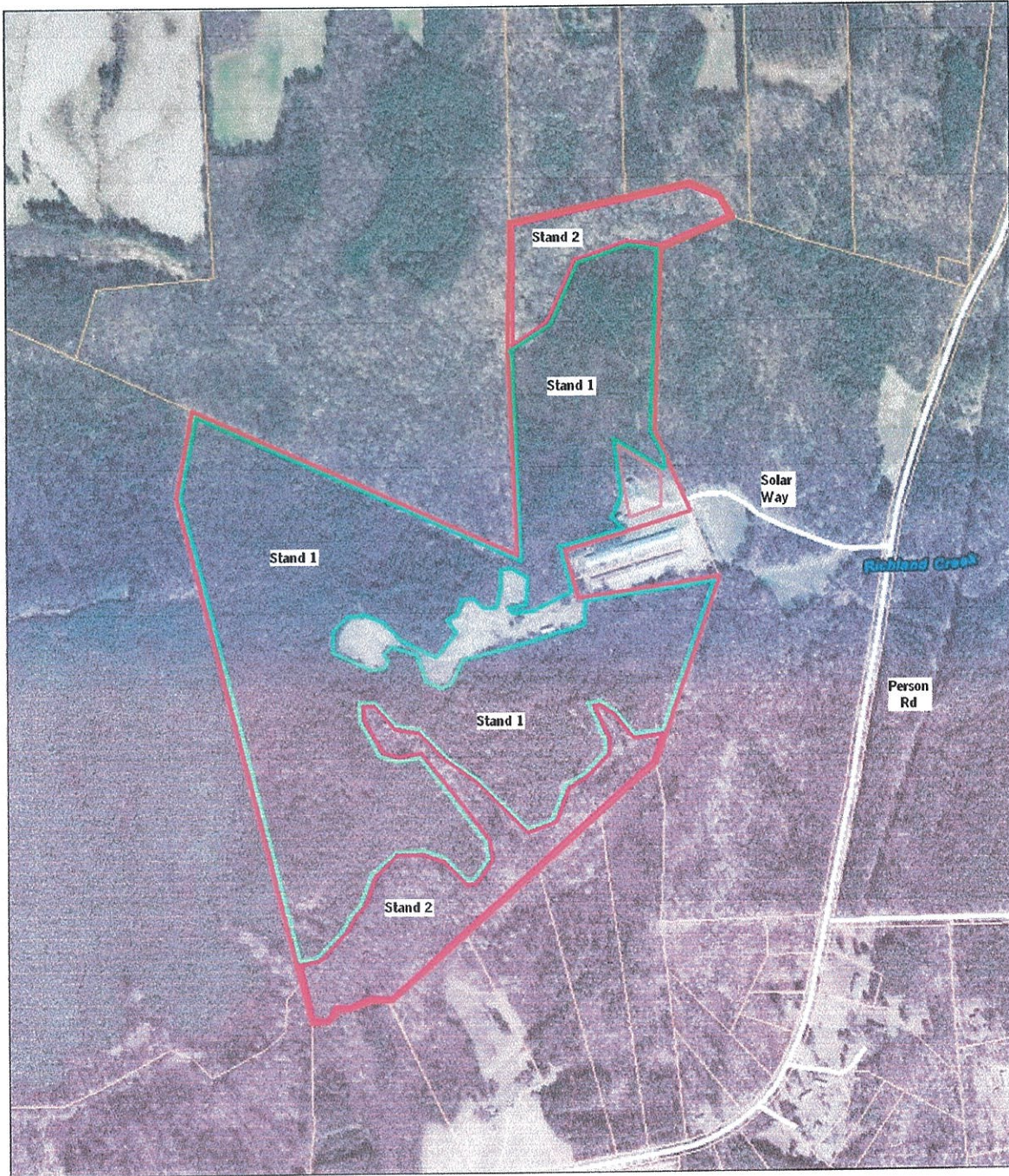
Contact this office for assistance with marketing, harvesting, thinning, and maintaining these stands in productive timberland. This office will also monitor all forestry activities to insure that all rules and regulations are adhered to.

We will be glad to discuss this evaluation and management plan at any time that is convenient with you.

Respectfully Submitted,

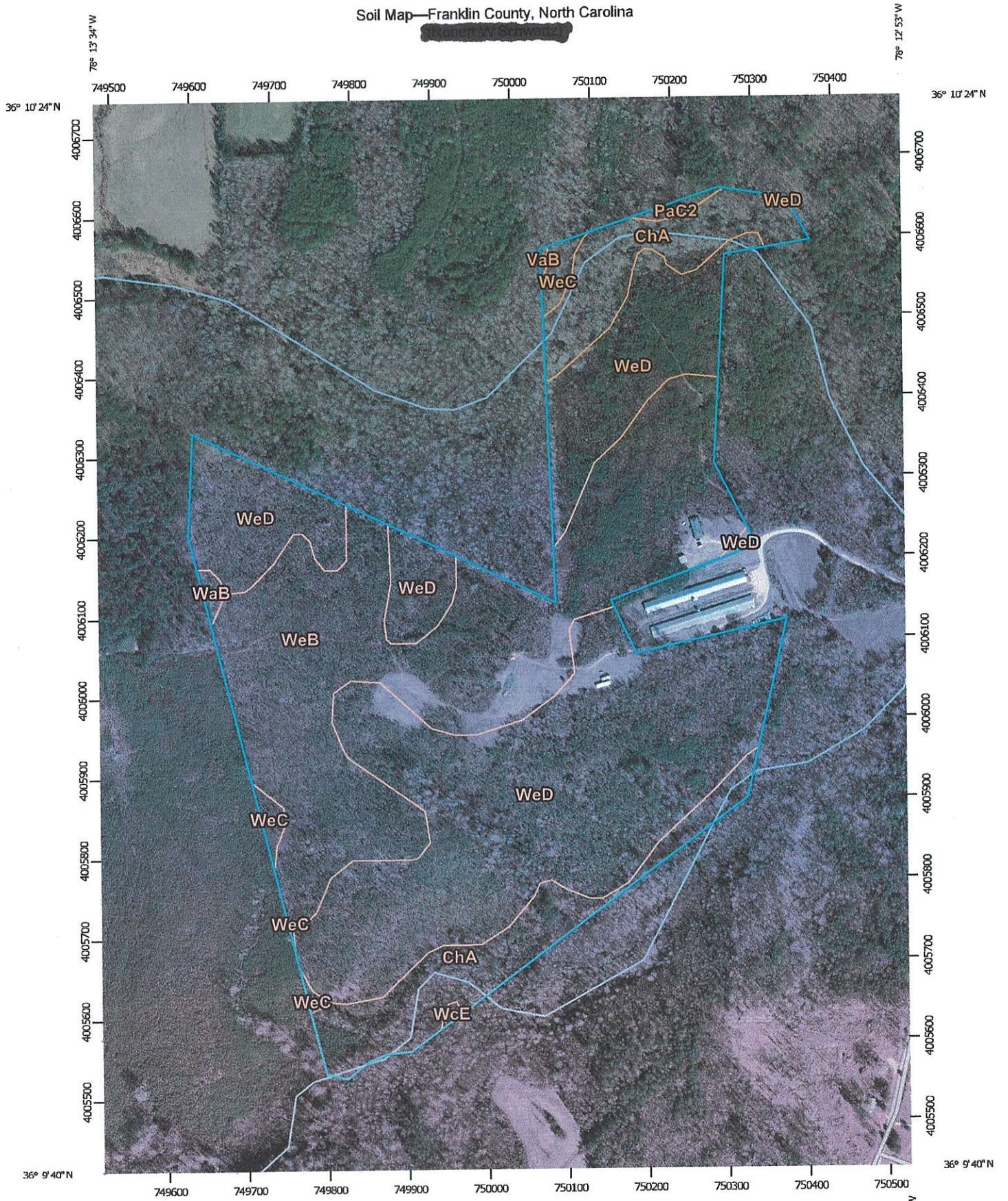


Fred W. Harris N.C.R.F. # 1159
Charles M. Davis, Jr. N.C.R.F. #755





Soil Map—Franklin County, North Carolina



Map Scale: 1:6,490 if printed on A portrait (8.5" x 11") sheet.

0 50 100 200 300 Meters


0 300 600 1200 1800 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)















Soils







 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Franklin County, North Carolina
 Survey Area Data: Version 15, Sep 10, 2014

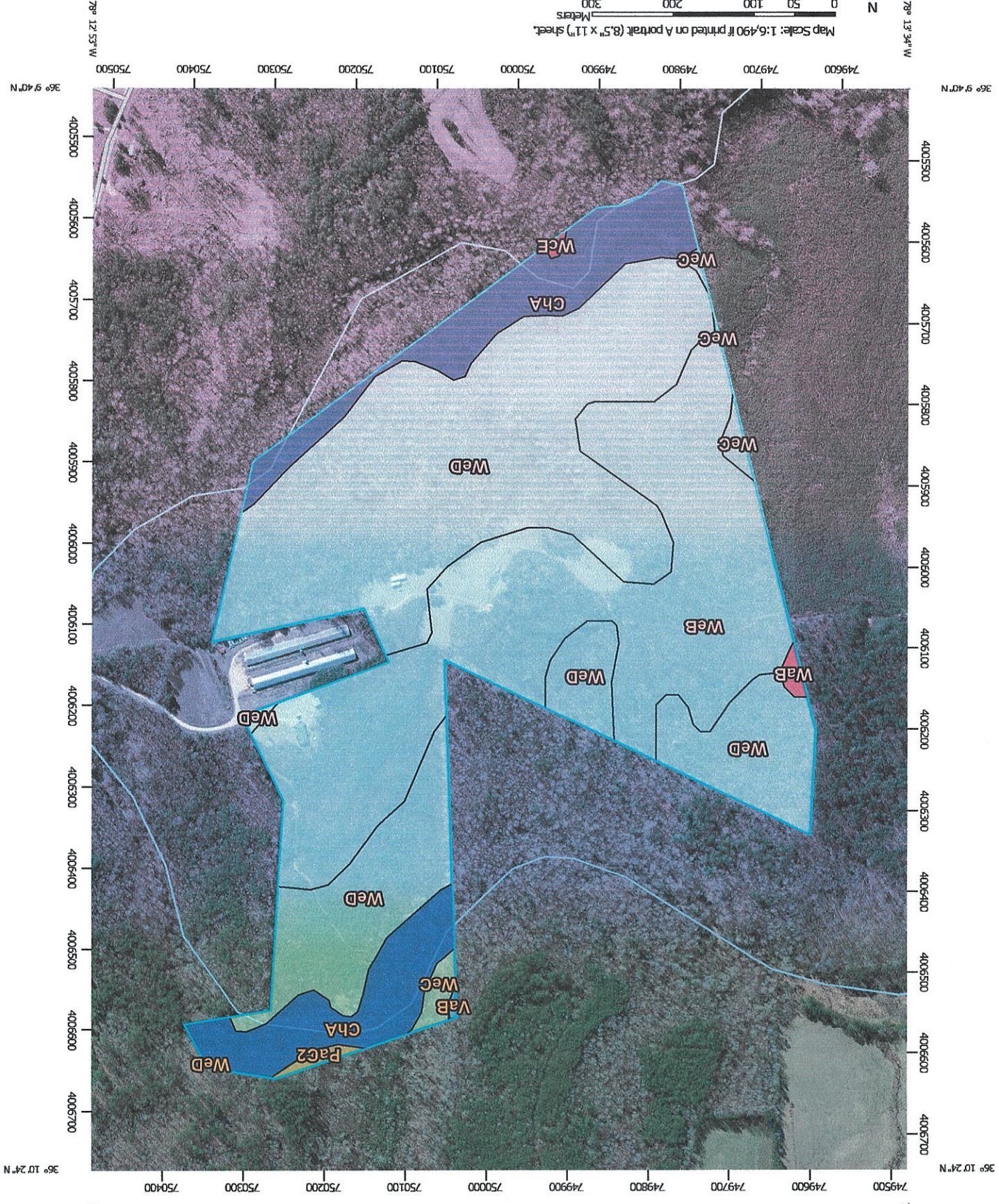
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 10, 2010—Apr 4, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



Forest Productivity (Tree Site Index): loblolly pine (Collie, Schumacher 1953 (690))—Franklin County, ...





























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Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84





MAP LEGEND

Area of Interest (AOI)		Transportation	
	Area of Interest (AOI)		Rails
Soils			Interstate Highways
Soil Rating Polygons			US Routes
	<= 69		Major Roads
	> 69 and <= 70		Local Roads
	> 70 and <= 87	Background	
	> 87 and <= 90		Aerial Photography
	> 90 and <= 95		
	Not rated or not available		
Soil Rating Lines			
	<= 69		
	> 69 and <= 70		
	> 70 and <= 87		
	> 87 and <= 90		
	> 90 and <= 95		
	Not rated or not available		
Soil Rating Points			
	<= 69		
	> 69 and <= 70		
	> 70 and <= 87		
	> 87 and <= 90		
	> 90 and <= 95		
	Not rated or not available		
Water Features			
	Streams and Canals		

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1



Forest Productivity (Tree Site Index): loblolly pine (Coile, Schumacher 1953 (690))

Forest Productivity (Tree Site Index): loblolly pine (Coile, Schumacher 1953 (690))— Summary by Map Unit — Franklin County, North Carolina (NC069)				
Map unit symbol	Map unit name	Rating (feet)	Acres in AOI	Percent of AOI
ChA	Chewacla and Wehadkee soils, 0 to 3 percent slopes, frequently flooded	95	14.2	13.4%
PaC2	Pacolet clay loam, 6 to 10 percent slopes, moderately eroded	70	0.4	0.3%
VaB	Vance sandy loam, 2 to 6 percent slopes	90	0.1	0.1%
WaB	Wake-Saw-Wedowee complex, 2 to 8 percent slopes, rocky	69	0.3	0.3%
WcE	Wake-Wateree complex, 15 to 30 percent slopes, very rocky	69	0.1	0.1%
WeB	Wedowee sandy loam, 2 to 6 percent slopes	87	36.6	34.6%
WeC	Wedowee sandy loam, 6 to 10 percent slopes	87	1.3	1.3%
WeD	Wedowee sandy loam, 10 to 15 percent slopes	87	52.9	49.9%
Totals for Area of Interest			105.9	100.0%

Description

The "site index" is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this attribute, only the representative value is used.

Rating Options

Units of Measure: feet

Tree: loblolly pine

Site Index Base: Coile, Schumacher 1953 (690)



Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No



