

**CONSERVATION EASEMENT  
BASELINE DOCUMENTATION REPORT  
CROCKETT 941, LLC  
HUMPHREYS COUNTY, TENNESSEE  
DECEMBER 19, 2016**



Prepared by:  
**Lead Author**  
Christopher R. Wilson, *Consulting Biologist*  
**Conservation Ecology LLC, Hendersonville, NC**

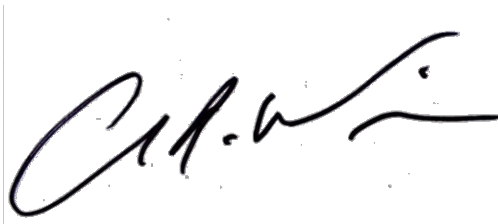
# **BASELINE DOCUMENTATION REPORT**

## **CROCKETT 941, LLC**

### **CONSERVATION EASEMENT**

**Baseline data for Conservation Easement granted by CROCKETT 941, LLC in  
Humphreys County, Tennessee, to Foothills Land Conservancy.**

**Prepared by:**

A handwritten signature in black ink, appearing to read "C.R. Wilson", is centered on the page. The signature is written in a cursive, flowing style.

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Christopher R. Wilson, Owner/ Principle  
Conservation Ecology, LLC, Hendersonville, NC

### **Contributing Authors**

**Meredith Clebsch, Foothills Land Conservancy** – supervised  
development of document

**Lloyd Raleigh, Helia Environmental, LLC, Asheville, NC** – Conducted  
botanical and natural community inventory, created photo-documentation,  
and contributed associated reporting and spatial data for mapping

(See Preparer Qualifications below)

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## PROJECT BRIEF

### CONSERVATION VALUES

**Size:** Approximately 941.76 acres

**Location:** Humphreys County, TN

**Elevation:** ~400' – 700' above mean sea level

**Watersheds:** Wolf Creek – Duck River (HUC12)

The Conservation Area contains high integrity examples of White Oak-Mixed Oak Dry-Mesic Alkaline Forest and contains at least 153 species of vascular plants including several associated with barrens such as southern prairie aster, Wildenow's croton, post oak, and Maryland senna.

The Conservation Area contains habitat for over 10 Greatest Conservation Need species identified in the 2015 Tennessee State Wildlife Action Plan, including Wood Thrush, Louisiana Waterthrush, Yellow-breasted Chat, Prairie Warbler, Timber Rattlesnake, and Eastern Box Turtle.

The Conservation Area lies in close proximity to a 52 acre conservation easement held by the Natural Resources Conservation Service, a 205 acre conservation easement held by the Nature Conservancy, and a 54 acre conservation easement held by The Land Trust for Tennessee.

The Conservation Area is contiguous with approximately 3,000 acres of conservation easement lands held by the Foothills Land Conservancy, including the Little Pumpkin & Little Pumpkin North and Ginn conservation properties, forming nearly 4,000 acres of contiguous conservation land.

The Tennessee State Wildlife Action Plan (2015) ranks nearly the entire Conservation Area as high or very high priority for the conservation of terrestrial, downstream aquatic, and nearby karst habitats.

The conservation area contains approximately 3.5 miles of intermittent streams, including tributaries to Grandmother Branch and Barren Hollow Branch according to the USGS National Hydrography Dataset. Streams on the property drain into the Duck River, which is ranked as a high conservation priority by the Tennessee State Wildlife Action Plan 2015. According to the U.S. Geological Survey, the Duck River is one of three hot spots for fish and mussel diversity in the entire world and is generally considered to be the richest river in varieties of freshwater animals on the North American continent.

The Nature Conservancy's *Resilient Sites for Terrestrial Conservation in the Southeast Region Assessment* (2014) ranked the entire property as "Above Average" or "Slightly Above Average" for its resilience to climate change, based on the diversity of microhabitats and climatic gradients available on the property, and habitat connectivity in the landscape, indicating the Conservation Area is a strategic priority for biodiversity conservation in the face of climate change.

The entire Conservation Area lies within the Duck River Terrestrial Conservation Site (a significant ecological area prioritized for conservation actions) identified in The Nature Conservancy's 2001 Ecoregional Assessment for the Interior Low Plateau.

**BACKGROUND INFORMATION**

**OWNER ACKNOWLEDGEMENT OF CONDITION**

This inventory is an accurate representation of the Protected Property at the time of the conveyance of the easement.

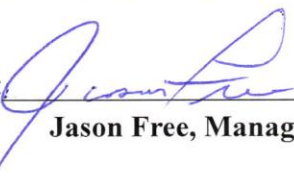
12/22/2016  
Date

**For the Grantors:**


**CROCKETT 941, LLC**

By: Lake Mountain Management, LLC  
Its: Manager

**Lake Mountain Management, LLC**

By:   
Jason Free, Manager

**For the Grantee:**

  
William C. Clabough, Sr.  
Foothills Land Conservancy

**OWNER INFORMATION**

Jason Free  
Lake Mountain Management, LLC  
KW Building  
200 East 2nd Avenue  
Rome, Georgia 30161

**PROPERTY DESCRIPTION**

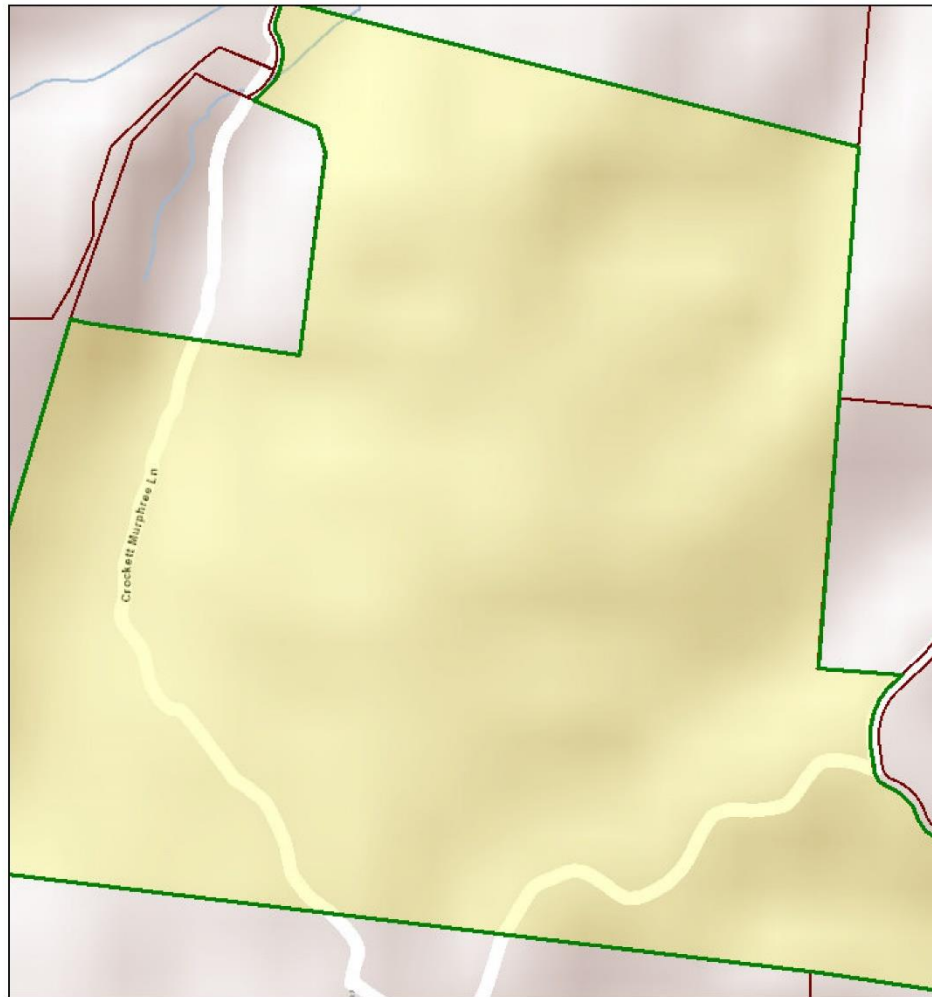
(See Exhibit A Below)

**Parcel Maps and Property Data**

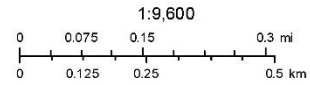
Information from TN Property Viewer.

Note: Neither Tax Map nor Data Report as yet reflect the boundaries of the proposed easement.

Humphreys County - Parcel: 152 010.00



October 7, 2016



OIR-GIS Services



State of Tennessee  Comptroller of the Treasury  
**Real Estate Assessment Data**

Home About New Search Return to List

County Number: 043

County Name: HUMPHREYS

Tax Year: 2016

**Property Owner and Mailing Address**

Jan 1 Owner:  
 WINZER W J & HELEN D  
 WINZER TRUSTEES  
 840 W BUCCANEER DR  
 WINNIE, TX 77665

**Property Location**

Address: SOUTH OF I-40

Map: 152 Grp: Ctrl Map: 152 Parcel: 010.00 PI: S/I: 000

**Value Information**

Reappraisal Year: 2011

Land Mkt Value: \$443,500  
 Improvement Value: \$0  
 Total Market Appraisal: \$443,500  
 Assessment %: 25  
 Assessment: \$110,875

**General Information**

Class: 10 - FARM  
 City #: 000 City: 000  
 SSD1: 000 SSD2: 000  
 District: 05 Mkt Area: B99  
 # Bldgs: 0 # Mobile Homes: 0  
 Utilities - Water / Sewer: 12 - NONE / NONE Utilities - Electricity: 00 - NONE  
 Utilities - Gas / Gas Type: 00 - NONE Zoning:

**Subdivision Data**

Subdivision:  
 Plat Bk: Plat Pg: Block: Lot:

**Additional Description**

TRACTS 45, 46 & 50

**Building Information**

**Extra Features**

**Sale Information**

Sale Date	Price	Book	Page	Vac/Imp	Type Instrument	Qualification
09/23/1993	\$108,019	162	1036	VACANT	WD	B
08/06/1993	\$108,019	162	258	VACANT	WD	G

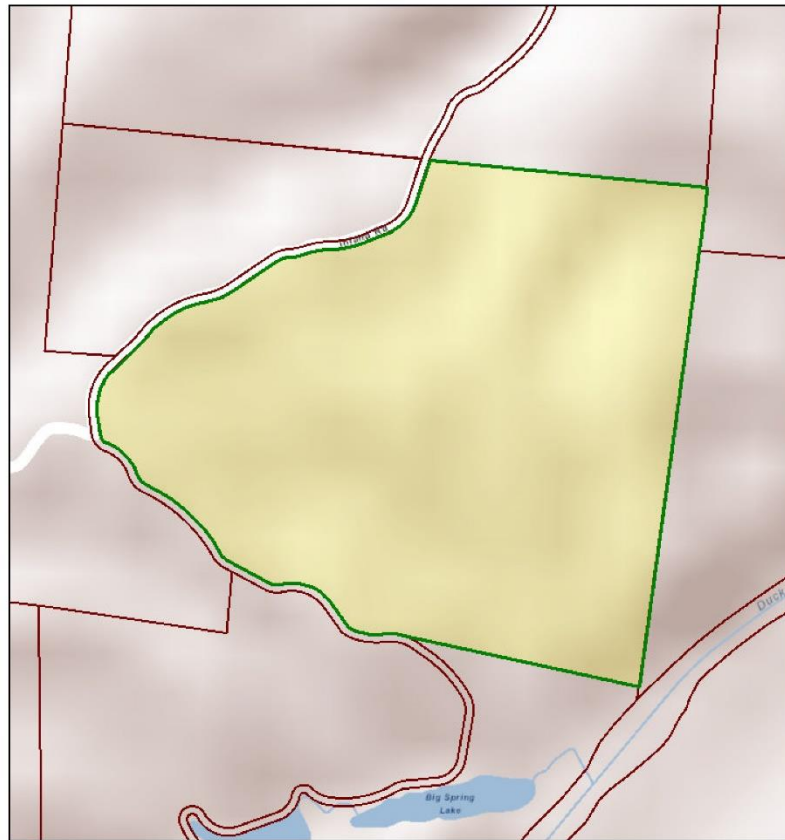
**Land Information**

Deed Acres: 657.09      Calc Acres: 0.00      Total Land Units: 657.09  
Land Type: 62 - WOODLAND 2      Soil Class: P      Units: 657.09

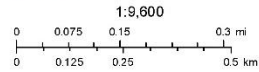
[New Search](#)      [Return to List](#)      [View GIS Map for this Parcel](#)

<a href="#">Glossary of Terms</a>	<a href="#">How to Search</a>	<a href="#">Fact Sheet</a>
<a href="#">Division of Property Assessments Home Page</a>	<a href="#">Comptroller of the Treasury Home Page</a>	<a href="#">State of Tennessee Home Page</a>

Humphreys County - Parcel: 152 007.00



October 7, 2016



ORIGIS Services

State of Tennessee  Comptroller of the Treasury  
**Real Estate Assessment Data**

Home About New Search Return to List

County Number: 043

County Name: HUMPHREYS

Tax Year: 2016

**Property Owner and Mailing Address**

Jan 1 Owner:  
 WINZER W J & HELEN D  
 WINZER TRUSTEES  
 840 W BUCCANEER DR  
 WINNIE, TX 77665

**Property Location**

Address: SOUTH OF I-40

Map: 152 Grp: Ctrl Map: 152 Parcel: 007.00 PI: S/I: 000

**Value Information**

Reappraisal Year: 2011

Land Mkt Value: \$192,200  
 Improvement Value: \$0  
 Total Market Appraisal: \$192,200  
 Assessment %: 25  
 Assessment: \$48,050

**General Information**

Class: 10 - FARM  
 City #: 000 City: 000  
 SSD1: 000 SSD2: 000  
 District: 05 Mkt Area: B99  
 # Bldgs: 0 # Mobile Homes: 0  
 Utilities - Water / Sewer: 12 - NONE / NONE Utilities - Electricity: 00 - NONE  
 Utilities - Gas / Gas Type: 00 - NONE Zoning:

**Subdivision Data**

Subdivision:  
 Plat Bk: Plat Pg: Block: Lot:

**Additional Description**

TRACTS 56 & 57

**Building Information**

**Extra Features**

**Sale Information**

Sale Date	Price	Book	Page	Vac/Imp	Type Instrument	Qualification
09/23/1993	\$108,019	162	1036	VACANT	WD	B
08/06/1993	\$108,019	162	258	VACANT	WD	G

**Land Information**

Deed Acres: 284.67      Calc Acres: 0.00      Total Land Units: 284.67  
Land Type: 62 - WOODLAND 2      Soil Class: P      Units: 284.67

[New Search](#)

[Return to List](#)

[View GIS Map for this Parcel](#)

<a href="#">Glossary of Terms</a>	<a href="#">How to Search</a>	<a href="#">Fact Sheet</a>
<a href="#">Division of Property Assessments Home Page</a>	<a href="#">Comptroller of the Treasury Home Page</a>	<a href="#">State of Tennessee Home Page</a>

## **PURPOSE AND SUMMARY OF CONSERVATION EASEMENT PROVISIONS**

It is the purpose of this Easement to assure that the Property will be retained forever in its current natural, scenic, forested, and/or open land condition and to prevent any use of the Property that will impair or interfere with the Conservation Values of the Property, subject only to the terms and provisions set forth herein. Grantor intends that this Easement will allow the use of the Property for such activities that are not inconsistent with the purposes of this Easement, including, without limitation, those involving agricultural and forest management, fire management and control, wildlife habitat improvement, hiking, and other private recreational uses that are not inconsistent with the purposes of this Easement.

**Sections 3 and 4 of the Conservation Easement (CE) document contain the major provisions. The CE is attached herein as Exhibit A.**

## **SIGNIFICANCE OF THE PROPERTY**

### *The Foothills Land Conservancy Corporate Mission*

The Foothills Land Conservancy is a tax-exempt, non-profit land conservation organization. Article V, Section 1 of the Foothills Land Conservancy Charter of Incorporation states that its purpose and objectives are to “work with public agencies, preservation and conservation-oriented organizations, property owners, and the interested public to encourage the preservation of natural and productive lands which contribute to the unique character and heritage of the foothills of the Great Smoky Mountains. The corporation will work to protect, preserve or enhance the land, water, geological, biological, historical, architectural, archeological, cultural or scenic resources of the foothills area and productive values of such lands in a manner consistent with its purpose and the purposes reflected in Tennessee Code Annotated, Section 64-9-301 et seq. and in conformance with Section 501c(3) of the Internal Revenue Code.” Section 3 further states the Conservancy is “to acquire, through gift, sale or other lawful means, interests in real property as necessary and convenient to protect such characteristics, which may include but are not limited to agricultural productivity, ecological integrity, historic characters, or managed public access.” This easement meets the purpose of the organization by conserving land, watershed, forestry, ecological and historical values.

### *Tennessee Agricultural, Forestry and Open Space Resource Preservation*

Tennessee Code Annotated 67-5-1002 states, “The general assembly finds that: (1) The existence of much agricultural, open space and forest lands is threatened by pressure from urbanization, scattered residential and commercial development, and the system of property taxation . . . . (2) The preservation of open space in or near urban areas contributes to: (A) The use, enjoyment and economic value of surrounding residential, commercial, industrial or public lands; (B) The conservation of natural resources, water, air, and wildlife; (C) The planning and preservation of and open condition for the general welfare; (D) A relief from the monotony of continued urban sprawls; and (E) An opportunity for the study and enjoyment of natural areas by urban and suburban resident.” This conservation easement serves the open space, habitat protection, watershed protection, and offset of development pressure needs of the state of Tennessee.

### *Tennessee Conservation Easement Act of 1981*

Tennessee Code Annotated 66-0-302 states, “It is the finding of the general assembly that the protection of the state’s land, water, geological, biological, historical, architectural, archaeological, cultural, and scenic resources is desirable for the purposes of maintaining and preserving the state’s natural and cultural heritage, and for assuring the maintenance of the state’s natural and social diversity and health, and for encouraging the wise management of productive farm and forest land.” This conservation easement is pursuant to that act.

**FOOTHILLS LAND CONSERVANCY BOARD OF DIRECTOR'S  
RESOLUTION ACCEPTING CONSERVATION EASEMENT**

Date: \_\_\_ 10/13/2016 \_\_\_\_\_

The Board of Directors of the Foothills Land Conservancy, a private non-profit corporation, hereby authorizes the acceptance of a conservation easement if offered from Crockett 941, LLC, Humphreys County, Tennessee.

  
\_\_\_\_\_  
Madge Cleveland, President

  
\_\_\_\_\_  
Mark Jendrek, Secretary

**MINUTES OF BOARD MEETING AT WHICH THE EASEMENT WAS  
ACCEPTED**

(excerpted)

**Foothills Land Conservancy (FLC)**

**Minutes of the Meeting of the Board of Directors of the Foothills Land  
Conservancy**

**October 13, 2016, at the offices of FLC, 373 Ellis Ave., Maryville, TN 37804**

Notice of the October 13, 2016 meeting, agenda, and the September 2016 minutes were distributed a week prior to the meeting. The financials were sent on October 10, 2016. The following members were in attendance at the October 13, 2016 meeting: Dan Barnett, Madge Cleveland, Wes James, Craig Jarvis, Mark King, David Long, Stan Malone, Billy Minser, Mike Parish, John Proffitt, Steve Polte, Sara Rose and David Zandstra. Non-voting Recording Secretary, Mark Jendrek was in attendance. Not in attendance were Jenny Hines, Dan Lawson, Ken Rueter, and Susanna Sutherland. The members in attendance during the meeting's discussion and voting constituted a quorum. FLC staff members, Bill Clabough, Meredith Clebsch, and Elise Eustace were present.

**Call to Order**

President, Madge Cleveland, called the meeting to order at 6:02pm.

**Approval of the Minutes**

Minutes from the September 2016 Board meeting were sent out to FLC Board Members a week prior to the September 2016 meeting. Mark King made a motion to approve the September 2016 minutes and David Zandstra seconded the motion. The vote for approval of the minutes was unanimous.

**Committee Reports**

***Land Protection Committee***

Meredith Clebsch reported that the Land Protection Committee met prior to the Board Meeting and discussed the revision of FLC's forestry management practices. Meredith explained that during Land Protection there was some discussion regarding the 100 foot Stream Management Zone buffer but that was the distance settled on by the committee. Clebsch said most of the language, shown on the slide, was already included in the guidelines from last summer but there were a few small changes along with adding in 'only trees native to the SE'. The Land Protection Committee made the motion to approve the following guidelines for inclusion in FLC's Forestry Management Guidelines and it was seconded by Craig Jarvis. The motion carried unanimously.

Meredith Clebsch also explained that there was an issue at FLC CE, Harper Branch. This CE is located in Van Buren County, TN. The landowner called Bill Clabough and said he had a beetle



infestation on the property and wanted to cut the trees out that had been compromised and also a buffer around the area. The forest management plan provided to FLC this past Spring said that they were not going to do any forestry in that area before 2017. Meredith went to the property area in question the day prior to the Board Meeting and did not see any evidence of beetles. Stan Malone said it could be turpentine beetles, which don't spread like the southern pine bark beetles. Meredith said that the consensus in Land Protection Committee is that if the landowner can prove there is a beetle infestation then more information will be requested and a plan to address the issue will occur. Otherwise, FLC will proceed with the usual forestry and the landowner will provide Foothills with a plan.

Meredith Clebsch reviewed a PowerPoint of 13 potential conservation easements for both the Land Protection Committee and the Board's pre-approval during the Board Meeting. Clebsch also provided information about the following projects for pre-approval via email to the Board prior to the meeting. These projects include:

(excerpted)

Mike Parish made the motion for pre-approval of the 13 properties and it was seconded by Stan Malone. David Long recused himself from voting. The motion passed unanimously.

Meredith Clebsch then reviewed a PowerPoint of 11 potential conservation easements for both the Land Protection Committee and the Board's final approval, if offered by the donor, during the Board Meeting. Clebsch also provided information about the following projects for final approval via email to the Board prior to the meeting. These projects include:

(excerpted)

Approval	Project	Acreage	County	State	House sites	Scenic	Nat Res	Open Space	Agric
FINAL	Crockett 941	941.76	Humphreys	TN	3	X	X	X	X

Mike Parish made the motion for final approval, if offered by the donor, of the 11 properties and it was seconded by Billy Minser. David Long recused himself from voting. The motion passed unanimously.

## **RECITALS from CROCKETT 941, LLC CONSERVATION EASEMENT**

(any reference to “Exhibits” in this section refers to the CE document)  
(from 12-13-16 CE Document)

WHEREAS, Grantor is the owner in fee simple of approximately Nine Hundred Forty-One and 76/100 (941.76) acres of real property, more or less, in two (2) adjacent parcels located in Humphreys County, Tennessee, certain portions of which are excluded from this Easement, and all of which is more particularly described on **Exhibit A-1**, and shown on **Exhibit A-2**, both of which are attached hereto and incorporated by this reference (“Property”); and

WHEREAS, Grantor certifies that the Property possesses certain ecological, natural, scenic, open space, and wildlife habitat values, more specifically set forth below (collectively, “Conservation Values”) of great importance to Grantor, the citizens and residents of, and visitors to, Humphreys County, Tennessee, and the people of, and visitors to, the State of Tennessee, including visitors to the Nathan Bedford Forrest State Park, Johnsonville State Historical Park, Dry Branch State Class II Natural-Scientific State Natural Area, Mousetail Landing State Park, Natchez Trace State Park, the Land Between the Lakes, and the other parks and natural areas in and around Humphreys County, Tennessee, and which further local, state, and national goals to conserve scenery and wildlife for the enjoyment of future generations; and

WHEREAS, the Property remains substantially undeveloped and is ecologically well-balanced, and includes a variety of mature trees, creeks, and streams, all of which provide habitat for a number of species of wildlife; therefore, preservation of the Property is desirable for conservation and ecological reasons as well as for aesthetic reasons; and

WHEREAS, the Property is an undeveloped, forested property an contains high integrity examples of the White Oak-Mixed Oak Dry-Mesic Alkaline Forest (G4G5); and

WHEREAS, the Property contains at least 153 species of vascular plants including several associated with barrens such as southern prairie aster, Wildenow’s croton, post oak, and Maryland senna; and

WHEREAS, the Property contains habitat for over 10 Greatest Conservation Need species identified in the 2015 Tennessee State Wildlife Action Plan, including Wood Thrush, Louisiana Waterthrush, Yellow-breasted Chat, Prairie Warbler, Timber Rattlesnake, and Eastern Box Turtle; and

WHEREAS, the Property lies in close proximity to a 52-acre conservation easement held by the Natural Resources Conservation Service, a 205-acre conservation easement held by the Nature Conservancy, and a 54-acre conservation easement held by The Land Trust for Tennessee; and

WHEREAS, the Property is contiguous with approximately 3,000 acres of conservation easement lands held by the Foothills Land Conservancy, including the Little Pumpkin Creek South, Little Pumpkin Creek North, and Ginn conservation properties, forming nearly 4,000 acres of contiguous conservation land; and

WHEREAS, the Tennessee State Wildlife Action Plan (2015) ranks nearly the entire Property as high or very high priority for the conservation of terrestrial, downstream aquatic, and nearby karst habitats; and

WHEREAS, the Property contains approximately 3.5 miles of intermittent streams including tributaries to Grandmother Branch and Barren Hollow Branch according to the USGS National Hydrography Dataset. Streams on the property drain into the Duck River, which is ranked as a high conservation priority by the Tennessee State Wildlife Action Plan 2015. According to the U.S. Geological Survey, the Duck River is one of three hot spots for fish and mussel diversity in the entire world and is generally considered to be the richest river in varieties of freshwater animals on the North American continent; and

WHEREAS, the Nature Conservancy's *Resilient Sites for Terrestrial Conservation in the Southeast Region Assessment* (2014) ranked the entire property as "Above Average" or "Slightly Above Average" for its resilience to climate change, based on the diversity of microhabitats and climatic gradients available on the property, and habitat connectivity in the landscape, indicating the Property is a strategic priority for biodiversity conservation in the face of climate change; and

WHEREAS, the entire Property lies within the Duck River Terrestrial Conservation Site, a significant ecological area prioritized for conservation actions, identified in The Nature Conservancy's 2001 Ecoregional Assessment for the Interior Low Plateau; and

WHEREAS, the specific Conservation Values of the Property are further documented in an inventory of relevant features of the Property, which is on file at the offices of Grantee, a partial listing of which is attached hereto as **Exhibit B** and incorporated by this reference ("Baseline Documentation"), which consists of reports, maps, photographs, and other documentation that, Grantor certifies and the parties agree, provide, collectively, an accurate representation of the Property at the time of this grant, and which is intended to serve as an objective, though non-exclusive, information baseline for monitoring compliance with the terms of this grant; and

WHEREAS, Grantor intends that the Conservation Values of the Property be preserved and maintained by prohibiting those land uses on the Property that impair, interfere, or are inconsistent with those Conservation Values; and

WHEREAS, Grantor further intends, as the owner of the Property, to convey to Grantee the right to preserve and protect the Conservation Values of the Property in perpetuity; and

WHEREAS, Grantee is a publicly supported, tax-exempt nonprofit organization and is a qualified organization under Sections 501(c)(3), 170(b)(1)(A)(vi) and 170(h), respectively, of the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder (“Internal Revenue Code”), whose primary purpose is to preserve land, water, air, wildlife, scenic qualities, and open space by implementing programs for, without limitation, protecting unique or rare natural areas, water front, stream corridors, and watersheds; and

WHEREAS, Grantee has a commitment to protect the Conservation Values of the Property and has the resources to enforce conservation restrictions; and

WHEREAS, preservation of the Property shall serve the following purposes (“Conservation Purposes”):

- (a) Preservation of the viewshed for the scenic enjoyment of the general public, which will yield a significant public benefit;
- (b) Protection of a relatively natural habitat for fish, wildlife, plants, and the ecosystems in which they function;
- (c) Preservation of open space for the scenic enjoyment of the general public, and pursuant to a clearly delineated government conservation policy which provides significant public benefit from both open space (including farm land and forest land) and agricultural use; and

WHEREAS, Grantor and Grantee desire to perpetually conserve the natural, scientific, educational, open space, and scenic resources of the Property to accomplish the Conservation Purposes; and

WHEREAS, Grantor intends to grant the easement and impose the restrictive covenants on the Property as set forth in this Easement to accomplish the Conservation Purposes;

## **LEGAL CONDITION**

### **DEED OF CONSERVATION EASEMENT WITH PROPERTY DESCRIPTION**

(See Exhibit A)

(Copies will reside in the files of the Donor, the Donee, and the Humphreys County, Tennessee Register of Deeds)

## CONSERVATION VALUES

The conservation values that make the CROCKETT 941, LLC property unique are described below and are detailed in the recitals (the “Whereas” statements) in the Conservation Easement.

Field data was gathered during site visits by Christopher Wilson on August 23, 2016, and by Lloyd Raleigh on August 14 & 17, 2016

### NATURAL HABITAT

**Conservation Context** – Adjacency and proximity to other conservation properties enhances the conservation value of a site by minimizing fragmentation and the influence of negative edge-effects, increasing the effective size of contiguous protected habitat, and promoting ecological connectivity.

- The property lies in close proximity to a 52 acre conservation easement held by the Natural Resources Conservation Service, a 205 acre conservation easement held by the Nature Conservancy, and a 54 acre conservation easement held by The Land Trust for Tennessee.
- The Conservation Area is contiguous with approximately 3,000 acres of conservation easement lands held by the Foothills Land Conservancy, including the Little Pumpkin South & North and the Ginn conservation projects, forming nearly 4,000 acres of total contiguous conservation land.

***Resilient Sites for Terrestrial Conservation in the Southeast Region Assessment - The Nature Conservancy*** - Climate change is altering species distributions in unpredictable ways, and conservationists require a way to prioritize strategic land conservation that will conserve the maximum amount of biological diversity despite changing distribution patterns. The Resilient Sites for Terrestrial Conservation GIS data layer identifies key areas for conservation based on land characteristics that increase diversity and resilience. The term “site resilience” refers to the capacity of a site to adapt to climate change while still maintaining diversity and ecological function. For more information see: Anderson, M.G., A. Barnett, M. Clark, C. Ferree, A. Olivero Sheldon, and J. Prince. 2014. *Resilient Sites for Terrestrial Conservation in the Southeast Region*. The Nature Conservancy, Eastern Conservation Science. 127 pp.

The Resilient Sites for Terrestrial Conservation GIS data layer was used to assess site resilience of the Property. This layer contains site resilience scores for 30m x 30m grid-cells across the Southeast that are based on three primary characteristics: geophysical representation (underlying geology, soils, and elevation), landscape complexity (local diversity of landforms), and landscape permeability (local connectivity). Site resilience scores are classified on a scale between “Far below average” to “Far above average”.

- The entire property is ranked as “Above Average” or “Slightly Above Average” for its resilience to climate change, based on the diversity of microhabitats and climatic gradients available on the property and habitat connectivity in the landscape, indicating the property is a strategic priority for biodiversity conservation in the face of climate change.

***TN State Wildlife Action Plan- TN Wildlife Resources Agency*** - In order to receive funds through the Wildlife Conservation and Restoration Program and the State Wildlife Grants Program, Congress charged each state and territory with developing a wildlife action plan. These proactive plans, known technically as “comprehensive wildlife conservation strategies,” assess the health of each state’s wildlife and habitats, identify the problems they face, and outline the actions that are needed to conserve them over the long term. State Wildlife Action Plans outline the steps that are needed to conserve wildlife and habitat before they become too rare or costly to restore. The TN SWAP identifies a list of species of Greatest Conservation Need (GCN) that serve as targets for conservation actions, as well as a GIS database illustrating priority areas for conservation that will ultimately contribute to the conservation of a variety of GCN species.

- Based on field surveys by Chris Wilson, the property contains suitable habitat for over 10 Greatest Conservation Need species identified in the 2015 Tennessee State Wildlife Action Plan, including Wood Thrush, Louisiana Waterthrush, Yellow-breasted Chat, Prairie Warbler, Timber Rattlesnake, and Eastern Box Turtle.
- A large (~6ft long) Timber Rattlesnake, a TN SWAP GCN species, was observed on the property by Chris Wilson during his site visit.
- Streams on the property drain into the Duck River, which is ranked as a high conservation priority by the Tennessee State Wildlife Action Plan 2015.
- The Tennessee State Wildlife Action Plan (2015) GIS database ranks nearly the entire Conservation Area as high or very high priority for the conservation of terrestrial, downstream aquatic, and nearby karst habitats.

Potential TN State Wildlife Action Plan - Species of Greatest Conservation Need on the property based on habitat observations by Chris Wilson

Common Name	Scientific Name	Global Rank	State Rank
Allegheny Woodrat	<i>Neotoma magister</i>	G3G4	S3
Blue-winged Warbler	<i>Vermivora cyanoptera</i>	G5	S4
Chimney Swift	<i>Chaetura pelagica</i>	G5	S5
Chuck-will's-widow	<i>Caprimulgus carolinensis</i>	G5	S3S4
Eastern Box Turtle	<i>Terrapene carolina</i>	G5	S4
Gray Bat	<i>Myotis grisescens</i>	G3	S2
Indiana Bat	<i>Myotis sodalis</i>	G2	S1
Kentucky Warbler	<i>Geothlypis formosa</i>	G5	S4
Louisiana Waterthrush	<i>Parkesia motacilla</i>	G5	S4
Northern Bobwhite	<i>Colinus virginianus</i>	G5	S2S3
Northern Myotis	<i>Myotis septentrionalis</i>	G4	S4
Northern Pinesnake	<i>Pituophis melanoleucus melanoleucus</i>	G4T4	S3
Prairie Warbler	<i>Setophaga discolor</i>	G5	S3S4
Timber Rattlesnake	<i>Crotalus horridus</i>	G4	S4
Western Pygmy Rattlesnake	<i>Sistrurus miliarius streckeri</i>	G5T5	S2S3
Whip-poor-will	<i>Caprimulgus vociferus</i>	G5	S3S4
Wood Thrush	<i>Hylocichla mustelina</i>	G5	S4
Yellow-breasted Chat	<i>Icteria virens</i>	G5	S4
Yellow-throated Warbler	<i>Setophaga dominica</i>	G5	S4

**Aquatic Features - USGS National Hydrography Dataset** – The USGS maintains a GIS database of the nation’s aquatic features including wetlands, streams, lakes, and ponds. The database was queried to determine if aquatic features occur on the property.

- The property is within the Wolf Creek-Duck River (HUC 12) watershed.
- The conservation area contains approximately 3.5 miles of perennial and intermittent streams including tributaries to Grandmother Branch, Barren Hollow Branch, and Duck River according to the USGS National Hydrography Dataset.
- Streams on the property drain into the Duck River, which is ranked as a high conservation priority by the Tennessee State Wildlife Action Plan 2015.
- According to the U.S. Geological Survey, the Duck River is one of three hot spots for fish and mussel diversity in the entire world and is generally considered to be the richest river in varieties of freshwater animals on the North American continent.
- The Duck River is also ranked as a high conservation priority by the Tennessee State Wildlife Action Plan 2015.
- Protecting stream buffers along drainages and restrictions on development of the property will contribute to water quality in these drainages.



***Ecoregional Assessments - The Nature Conservancy*** - Ecoregional Assessments are a method by which The Nature Conservancy establishes priorities for conservation actions. This process evaluates large geographic areas delineated by climate, geology, and physiography, for their characteristic biodiversity patterns. The resulting plan identifies viable populations of rare species and the best example of characteristic natural communities, providing a regional blueprint for conservation success. Ecoregions provide an ecological framework, as opposed to political boundaries, for understanding and conserving biodiversity across a full range of environmental gradients. TNC currently identifies 67 terrestrial ecoregions in the conterminous U.S., nine of which fall into the Eastern Division. A Conservation Portfolio is a set of sites that collectively represent the best examples of the species and habitats that characterize the ecoregion.

- The entire Conservation Area lies within the Duck River Terrestrial Conservation Site (a significant ecological area prioritized for conservation actions) identified in The Nature Conservancy's 2001 Ecoregional Assessment for the Interior Low Plateau.

***TN Natural Heritage Program Database – TN Department of Environment & Conservation*** - The Natural Heritage Inventory Program maintains a Geographic Information Systems (GIS) database which contains information on the distribution and ecology of rare plants, animals, and ecological communities across Tennessee. The Natural Heritage database was queried for records on the property. Rare species and natural communities occurring near the property have potential to occur on the property itself, can be used for targets during field surveys, and may benefit from the protection of the property. Thus, the database was also queried for rare species and natural communities within 4 miles of the property boundary.

- No rare species records occur on the property.
- 16 rare species occur within 4 miles of the property.
- 20 rare species occur within the Lobeville & Coble 7.5' USGS Quads, in which the property is located.

See Flora and Fauna Reports (below) for a table of Natural Heritage Database results.

***On-site Botanical & Natural Community Inventories*** – were conducted by Lloyd Raleigh. His primary findings were:

- The property contains high integrity examples of White Oak-Mixed Oak Dry-Mesic Alkaline Forest, as well as the rare three-birds orchid (*Triphora trianthophora*).
- The property contains at least 153 species of vascular plants, including several associated with barrens such as southern prairie aster, Wildenow's croton, post oak, and Maryland senna.

Four sites of good (B-rank) quality White Oak-Mixed Oak Dry-Mesic Alkaline Forest (G4G5) occur within the tract. Surrounding one of the areas is a large (42 acre) late-successional forest of fair (C-rank) quality. These areas will eventually transition to mature natural communities, mostly alkaline forest.

At least 153 species of vascular plants occur on the tract, including several associated with barrens among them southern prairie aster, Wildenow's croton, post oak, and Maryland senna.

Invasive species abundance is significantly low.

Much of this site has been extensively logged. Early successional loblolly plantations, totaling approximately 15% of the tract area, are concentrated in the eastern half of the tract along the ridges. In the hollows below these plantations are hardwoods ranging from early to late successional. The three-birds orchid (*Triphora trianthophora*), a globally rare (G3G4) species that is rare throughout its range, occurs in these hollows at one late-successional site.

Another ten percent of the tract contains early successional hardwoods from 2010 clear-cuts. These areas have not yet fully regenerated.

The remaining acreage is mid-successional habitat on average, with pockets of early and late successional habitat throughout.

### **Natural Communities Observed**

#### **White Oak - Mixed Oak Dry-Mesic Alkaline Forest (G4)**

***Quercus alba - Quercus rubra - Quercus muehlenbergii / Cercis canadensis***  
**Forest (CEGL002070)**

**Condition Rank:** B (Good)

**Successional Stage:** Mature

Four good examples of a White Oak - Mixed Oak Dry-Mesic Alkaline Forest occur at Crockett. This is an oak-dominated community, but mesophytic species such as tulip poplar, red maple, black cherry, American beech, and white ash are frequent associates. This natural community is the dominant type found in the hollows, where the cherts still create dry conditions with dry creek beds, but the

landscape formation allows for mesic species to exist. In addition, the chert and associated limestone outcrops provide a calcareous-tending flora, thus the alkaline description.

White oak is the predominant oak species, with trees up to 30 inches in diameter occurring. Other oaks include northern red oak, black oak, and chestnut oak. Mockernut hickory and pignut hickory also occur. Subcanopy trees include black gum, southern sugar maple, redbud, box-elder, hophornbeam, sourwood, and winged elm. The shrub layer is moderately dense, containing basic indicators such as Carolina buckthorn and coralberry, and also bigleaf snowbell and beaked hazelnut.

The herb and graminoid layer is diverse and includes Jack-in-the-pulpit, Canada horse-balm, broad beech fern, wild comfrey, wood betony, lyreleaf sage, dwarf crested iris, southern shorthusk, northern maidenhair, hog peanut, jumpseed, Carolina elephant's foot, and Maryland senna. Nepalese browntop is frequently found, especially in the dry stream bed channels.

See Flora and Fauna Reports for a complete plant species list.

***Conservation Management Areas*** - Special management zones were established on the property and are subject to different restrictions under the conservation easement. Refer to the language within the conservation easement document for the specific restrictions and reserved rights within these zones. In general, Conservation Management Area "A" refers to the least restricted areas. Conservation Management Area "B" refers to buffer areas surrounding and including specific special features (such as streams, special habitat areas, rock outcrops, cliffs, or rare species locations), which are defined by a specific distance from the feature, and where uses are more restricted (for example, a 100' buffer on streams). Conservation Management Area "C" refers to additional special areas that are delineated based on groupings special features (such as those features mentioned above, as well as rare or high quality natural communities, critical watersheds, groupings of such features, and additional areas to buffer or provide connectivity between features), that will also benefit from enhanced protections under the easement. These areas are identified on the Conservation Management Areas Map and in GIS shapefiles on file with the Conservancy.

- Conservation Management Area "B" protects a 100 foot stream buffer along Cuff Hollow.
- Conservation Management Area "C" protects a riparian area containing the three-birds orchid and associated mesic habitats, a White Oak-Mixed Oak Dry-Mesic Alkaline Forest occurrence, and alluvial areas and slopes at Witherspoon and Barren Hollows.

- Providing special protections in the CMA “B’ & “C” areas protects the most sensitive and special natural features of the property while allowing approximately 60 percent of the tract to be used as a working forest.

**OPEN SPACE**

- Working Forest - The easement restricts development of the property and conversion of its forests, while protecting operable stands of forests for timber harvest according to Trust approved Forest Management Plan.
- Agriculture - The property contains Prime Farmland Soils and the easement allows agricultural uses within workable areas of the property, subject to Trust approval.

**GEOLOGY**

According to the USGS Mineral Resources Program, the underlying geology of the property is almost entirely Chert, with a small area of Clay.

**SOILS**

According to the USDS-NRCS SSURGO database, the following soil types occur on the Property:

MUSYM	MU Name	Farmland Class
Bc	Bodine cherty silt loam	Not prime farmland
Bcx	Bodine cherty silt loam, slope	Not prime farmland
Bcz	Bodine cherty silt loam, steep	Not prime farmland
Dls	Dickson silt loam, shallow	Not prime farmland
Hg	Humphreys gravelly silt loam, 2 to 5 percent slopes	All areas are prime farmland

## **LAND USE INFORMATION & ANTHROPOGENIC FEATURES**

The property is primarily used for forestry and hunting. There is a system of forest roads and trails, as well as log landings, throughout the property. No permanent structures were observed, but there were several temporary hunting stands, and temporary sheds and camper trailers observed (see photos). The road system might also be used by recreational vehicles.

## FLORA AND FAUNA REPORTS

### TN NATURAL HERITAGE DATABASE REPORT ON LISTED SPECIES

Records within 4 miles of the Property

Common Name	Scientific Name
American Ginseng	<i>Panax quinquefolius</i>
Bearded Rattlesnake-root	<i>Prenanthes barbata</i>
Blue Sucker	<i>Cycleptus elongatus</i>
Coppercheek Darter	<i>Etheostoma aquali</i>
Egg-mimic Darter	<i>Etheostoma pseudovulatum</i>
Geniculate River Snail	<i>Lithasia geniculata fuliginosa</i>
Golden Darter	<i>Etheostoma denoncourti</i>
Gray Myotis	<i>Myotis grisescens</i>
Helmet Rocksnail	<i>Lithasia duttoniana</i>
Highfin Carpsucker	<i>Carpiodes velifer</i>
Meadow Jumping Mouse	<i>Zapus hudsonius</i>
Northern Pinesnake	<i>Pituophis melanoleucus melanoleucus</i>
Price's Potato-bean	<i>Apios priceana</i>
Saddled Madtom	<i>Noturus fasciatus</i>
Slenderhead Darter	<i>Percina phoxocephala</i>
Southern Cavefish	<i>Typhlichthys subterraneus</i>

#### (records within the Lobeville & Coble 7.5' USGS Quads)

Category	Common Name	Scientific Name	Global Rank	State Rank	Fed. Status	State Status
Mollusc	Rabbitsfoot	<i>Quadrula cylindrica cylindrica</i>	G3G4T3	S3	LT	Rare, Not State Listed
Fish	Coppercheek Darter	<i>Etheostoma aquali</i>	G2G3	S2S3	--	T
Insect	Acuminate Snaketail	<i>Ophiogomphus acuminatus</i>	G3	S2	--	Rare, Not State Listed
Mollusc	Geniculate River Snail	<i>Lithasia geniculata fuliginosa</i>	G3T3Q	S2	--	Rare, Not State Listed
Mammal	Meadow Jumping Mouse	<i>Zapus hudsonius</i>	G5	S4	No Status	D
Flowering Plant	Sweet-scented Indian-plantain	<i>Hasteola suaveolens</i>	G4	S2	--	S
Mammal	Gray Myotis	<i>Myotis grisescens</i>	G3	S2	LE	E
Flowering Plant	Price's Potato-bean	<i>Apios priceana</i>	G2	S3	LT	E
Flowering Plant	Sand Grape	<i>Vitis rupestris</i>	G3	S1	--	E
Flowering Plant	American Ginseng	<i>Panax quinquefolius</i>	G3G4	S3S4	--	S-CE
Fish	Egg-mimic Darter	<i>Etheostoma pseudovulatum</i>	G1	S1	--	E
Mammal	Allegheny Woodrat	<i>Neotoma magister</i>	G3G4	S3	--	D
Mollusc	Helmet Rocksnail	<i>Lithasia duttoniana</i>	G2Q	S2	--	Rare, Not State Listed
Mammal	Indiana Myotis	<i>Myotis sodalis</i>	G2	S1	LE	E
Fish	Saddled Madtom	<i>Noturus fasciatus</i>	G2	S2	--	T
Amphibian	Hellbender	<i>Cryptobranchus alleganiensis</i>	G3G4	S3	No Status	D
Fish	Golden Darter	<i>Etheostoma denoncourti</i>	G2	S2	--	Rare, Not State Listed
Fish	Southern Cavefish	<i>Typhlichthys subterraneus</i>	G4	S3	--	D
Reptile	Northern Pinesnake	<i>Pituophis melanoleucus melanoleucus</i>	G4T4	S3	--	T

## OBSERVED SPECIES LIST

Plant species observed by Lloyd Raleigh during field visit to the CROCKETT 941, LLC Property

Common Name	Genus	Species
Allegheny Blackberry	<i>Rubus</i>	<i>allegheniensis</i>
Allegheny Hawkweed	<i>Hieracium</i>	<i>paniculatum</i>
American Beech	<i>Fagus</i>	<i>grandifolia</i>
American Hog Peanut	<i>Amphicarpaea</i>	<i>bracteata</i>
Anise-Scented, Fragrant, or Sweet Goldenrod	<i>Solidago</i>	<i>odora</i>
Beaked Agrimony	<i>Agrimonia</i>	<i>rostellata</i>
Beaked Hazelnut	<i>Corylus</i>	<i>cornuta</i>
Beaked Panic-Grass	<i>Panicum</i>	<i>anceps</i>
Beefsteak Plant	<i>Perilla</i>	<i>frutescens</i>
Bigleaf Snowbell	<i>Styrax</i>	<i>grandifolius</i>
Black Cherry	<i>Prunus</i>	<i>serotina</i>
Black Gum	<i>Nyssa</i>	<i>sylvatica</i>
Black-Eyed Susan	<i>Rudbeckia</i>	<i>hirta</i>
Blackjack Oak	<i>Quercus</i>	<i>marilandica</i>
Blackseed Plantain	<i>Plantago</i>	<i>rugelii</i>
Blue Mistflower	<i>Conoclinium</i>	<i>coelestinum</i>
Bracken Fern	<i>Pteridium</i>	<i>aquilinum</i>
Broadleaf Woodoats	<i>Chasmanthium</i>	<i>latifolium</i>
Bushy Aster	<i>Symphotrichum</i>	<i>dumosum</i>
Canadian Clearweed	<i>Pilea</i>	<i>pumila</i>
Canadian Horseweed	<i>Conyza</i>	<i>canadensis</i>
Canadian Licorice Root	<i>Ligusticum</i>	<i>canadense</i>
Canadian Lousewort, Wood Betony	<i>Pedicularis</i>	<i>canadensis</i>
Carolina Buckthorn	<i>Rhamnus</i>	<i>caroliniana</i>
Carolina Elephant's Foot	<i>Elephantopus</i>	<i>carolinianus</i>
Cat Greenbrier, Sawbrier	<i>Smilax</i>	<i>glauca</i>
Chestnut or Mountain Oak	<i>Quercus</i>	<i>montana</i>
Chinese or Sericea Lespedeza	<i>Lespedeza</i>	<i>cuneata</i>
Cinnamon Fern	<i>Osmunda</i>	<i>cinnamomea</i>
Common Boneset	<i>Eupatorium</i>	<i>perfoliatum</i>
Common Christmas Fern	<i>Polystichum</i>	<i>acrostichoides</i>
Common Cinquefoil	<i>Potentilla</i>	<i>simplex</i>
Common Dittany	<i>Cunila</i>	<i>origanoides</i>
Common Mullein	<i>Verbascum</i>	<i>thapsus</i>
Common Round-Leaved Greenbrier	<i>Smilax</i>	<i>rotundifolia</i>
Common Selfheal	<i>Prunella</i>	<i>vulgaris</i>
Common White Snakeroot	<i>Ageratina</i>	<i>altissima</i>
Common Yellow Wood-Sorrel	<i>Oxalis</i>	<i>stricta</i>
Coralberry	<i>Symphoricarpos</i>	<i>orbiculatus</i>
Crane-Fly Orchid	<i>Tipularia</i>	<i>discolor</i>
Creeping Lespedeza	<i>Lespedeza</i>	<i>repens</i>
Deer-Tongue Panic-Grass	<i>Dichanthelium</i>	<i>clandestinum</i>
Deptford Pink	<i>Dianthus</i>	<i>armeria</i>
Devil's Grandmother	<i>Elephantopus</i>	<i>tomentosus</i>
Devil's Walking Stick	<i>Aralia</i>	<i>spinosa</i>
Dwarf Crested Iris	<i>Iris</i>	<i>cristata</i>
Eastern Rabbit-Tobacco	<i>Pseudognaphalium</i>	<i>obtusifolium</i>
Eastern Red Cedar	<i>Juniperus</i>	<i>virginiana</i>

Eastern Redbud	<i>Cercis</i>	<i>canadensis</i>
Ebony Spleenwort	<i>Asplenium</i>	<i>platyneuron</i>
Farkleberry, Sparkleberry	<i>Vaccinium</i>	<i>arboreum</i>
Feverfew, Wild Quinine	<i>Parthenium</i>	<i>integrifolium</i>
Field Paspalum	<i>Paspalum</i>	<i>laeve</i>
Field Thistle	<i>Cirsium</i>	<i>discolor</i>
Flowering Dogwood	<i>Cornus</i>	<i>florida</i>
Flowering Spurge	<i>Euphorbia</i>	<i>corollata</i>
Fly-Poison	<i>Amianthium</i>	<i>muscitoxicum</i>
Gray, Gray-Stemmed, or Old-Field Goldenrod	<i>Solidago</i>	<i>nemoralis</i>
Greater Tickseed	<i>Coreopsis</i>	<i>major</i>
Hairy Leafcup	<i>Smallanthus</i>	<i>uvedalius</i>
Hairy Lespedeza	<i>Lespedeza</i>	<i>hirta</i>
Hairy Skullcap	<i>Scutellaria</i>	<i>elliptica</i>
Hairy Sunflower	<i>Helianthus</i>	<i>hirsutus</i>
Hoary Skullcap	<i>Scutellaria</i>	<i>incana</i>
Hoary Tick-Trefoil	<i>Desmodium</i>	<i>canescens</i>
Hophornbeam, Ironwood	<i>Ostrya</i>	<i>virginiana</i>
Indian Tobacco	<i>Lobelia</i>	<i>inflata</i>
Jack-in-the-Pulpit	<i>Arisaema</i>	<i>triphillum</i>
Japanese Clover	<i>Kummerowia</i>	<i>striata</i>
Japanese Honeysuckle	<i>Lonicera</i>	<i>japonica</i>
Johnson-Grass	<i>Sorghum</i>	<i>halepense</i>
Jumpseed	<i>Persicaria</i>	<i>virginiana</i>
Laciniate-Leaved Thoroughwort	<i>Eupatorium</i>	<i>hyssopifolium</i>
Little Bluestem	<i>Schizachyrium</i>	<i>scoparium</i>
Little Ladies' -Tresses	<i>Spiranthes</i>	<i>tuberosa</i>
Loblolly Pine	<i>Pinus</i>	<i>taeda</i>
Maryland Goldenaster	<i>Chrysopsis</i>	<i>mariana</i>
Maryland Senna	<i>Senna</i>	<i>marilandica</i>
Mockernut Hickory	<i>Carya</i>	<i>tomentosa</i>
Multiflora Rose	<i>Rosa</i>	<i>multiflora</i>
Muscadine Grape	<i>Vitis</i>	<i>rotundifolia</i>
Naked-Flower Tick-Trefoil	<i>Desmodium</i>	<i>nudiflorum</i>
Nepalese Browntop	<i>Microstegium</i>	<i>vimineum</i>
Northern Dewberry	<i>Rubus</i>	<i>flagellaris</i>
Northern Hackberry	<i>Celtis</i>	<i>occidentalis</i>
Northern Maidenhair	<i>Adiantum</i>	<i>pedatum</i>
Northern Red Oak	<i>Quercus</i>	<i>rubra</i>
Nuttall's Tick-Trefoil	<i>Desmodium</i>	<i>nuttallii</i>
Orangegrass	<i>Hypericum</i>	<i>gentianoides</i>
Pale Indian Plantain	<i>Arnoglossum</i>	<i>atriplicifolium</i>
Panicled Tick-Trefoil	<i>Desmodium</i>	<i>paniculatum</i>
Partridge Pea	<i>Chamaecrista</i>	<i>fasciculata</i>
Path Rush	<i>Juncus</i>	<i>tenuis</i>
Pawpaw	<i>Asimina</i>	<i>triloba</i>
Pignut Hickory	<i>Carya</i>	<i>glabra</i>
Pink Fuzzy-Bean	<i>Strophostyles</i>	<i>umbellata</i>
Poison Ivy	<i>Toxicodendron</i>	<i>radicans</i>
Poke Milkweed	<i>Asclepias</i>	<i>exaltata</i>
Poorjoe	<i>Diodia</i>	<i>teres</i>
Possum Grape	<i>Vitis</i>	<i>cinerea</i>
Post Oak	<i>Quercus</i>	<i>stellata</i>
Prostrate Tick-Trefoil	<i>Desmodium</i>	<i>rotundifolium</i>
Purple Passion-Flower, Maypops	<i>Passiflora</i>	<i>incarnata</i>



Rattlesnake Fern	<i>Botrypus</i>	<i>virginianus</i>
Red Maple	<i>Acer</i>	<i>rubrum</i>
Rose Pink	<i>Sabatia</i>	<i>angularis</i>
Rough Boneset	<i>Eupatorium</i>	<i>pilosum</i>
Royal Fern	<i>Osmunda</i>	<i>regalis</i>
Saw Greenbrier	<i>Smilax</i>	<i>bona-nox</i>
Sensitive Fern	<i>Onoclea</i>	<i>sensibilis</i>
Sessile-Leaved Bellwort	<i>Uvularia</i>	<i>sessilifolia</i>
Short's Aster	<i>Symphotrichum</i>	<i>shortii</i>
Slippery or Red Elm	<i>Ulmus</i>	<i>rubra</i>
Smooth Sumac	<i>Rhus</i>	<i>glabra</i>
Sourwood	<i>Oxydendrum</i>	<i>arboreum</i>
Southern Lady Fern	<i>Athyrium</i>	<i>filix-femina</i>
Southern or Broad Beech Fern	<i>Phegopteris</i>	<i>hexagonoptera</i>
Southern Prairie Aster	<i>Eurybia</i>	<i>hemispherica</i>
Southern Red Oak	<i>Quercus</i>	<i>falcata</i>
Southern Shorthusk	<i>Brachyelytrum</i>	<i>erectum</i>
Southern Sugar Maple	<i>Acer</i>	<i>saccharum</i>
Sparselobe Grapefern	<i>Sceptridium</i>	<i>biterdatum</i>
Spotted Lady's-Thumb	<i>Persicaria</i>	<i>maculosa</i>
Spurred Butterfly Pea	<i>Centrosema</i>	<i>virginianum</i>
Starry Rosinweed	<i>Silphium</i>	<i>asteriscus</i>
Stiff Marsh Bedstraw	<i>Galium</i>	<i>tinctorium</i>
Sweet Birch	<i>Betula</i>	<i>lenta</i>
Sweetgum	<i>Liquidambar</i>	<i>styraciflua</i>
Sycamore	<i>Platanus</i>	<i>occidentalis</i>
Tall Hairy Agrimony	<i>Agrimonia</i>	<i>gryposepala</i>
Tall Tickseed	<i>Coreopsis</i>	<i>tripteris</i>
Tapered-Leaved Panic-Grass	<i>Dichantherium</i>	<i>acuminatum</i>
Three-Birds Orchid	<i>Triphora</i>	<i>trianthophora</i>
Tree-of-Heaven	<i>Ailanthus</i>	<i>altissima</i>
Tulip-Tree, Yellow Poplar	<i>Liriodendron</i>	<i>tulipifera</i>
Upland Boneset	<i>Eupatorium</i>	<i>sessilifolium</i>
Upland Swamp Privet	<i>Forestiera</i>	<i>ligustrina</i>
Venus' Pride	<i>Houstonia</i>	<i>purpurea</i>
Virginia Creeper	<i>Parthenocissus</i>	<i>quinquefolia</i>
Virginia Tephrosia	<i>Tephrosia</i>	<i>virginiana</i>
White Clover	<i>Trifolium</i>	<i>repens</i>
White Oak	<i>Quercus</i>	<i>alba</i>
White or American Ash	<i>Fraxinus</i>	<i>americana</i>
White Vervain	<i>Verbena</i>	<i>urticifolia</i>
Wild Comfrey	<i>Cynoglossum</i>	<i>virginianum</i>
Wild Yam	<i>Dioscorea</i>	<i>villosa</i>
Willdenow's Croton	<i>Croton</i>	<i>willdenowii</i>
Winged Elm	<i>Ulmus</i>	<i>alata</i>
Winged Sumac	<i>Rhus</i>	<i>copallinum</i>
Woodland Sunflower	<i>Helianthus</i>	<i>microcephalus</i>
Wrinkle-Leaved or Rough-Stemmed Goldenrod	<i>Solidago</i>	<i>rugosa</i>
Yellow Foxtail	<i>Setaria</i>	<i>pumila</i>

Wildlife species observed by Chris Wilson during field visit to the

CROCKETT 941, LLC Property

<b>Common Name</b>	<b>Scientific Name</b>
American Crow	<i>Corvus brachyrhynchos</i>
Black Vulture	<i>Coragyps atratus</i>
Blue Jay	<i>Cyanocitta cristata</i>
Blue-gray Gnatcatcher	<i>Poliopitila caerulea</i>
Carolina Chickadee	<i>Poecile carolinensis</i>
Carolina Wren	<i>Thryothorus ludovicianus</i>
Coyote	<i>Canis latrans</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Eastern Bluebird	<i>Sialia sialis</i>
Eastern Towhee	<i>Pipilo erythrophthalmus</i>
Eastern Wood-Pewee	<i>Contopus virens</i>
Green Frog	<i>Lithobates clamitans</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Northern Cardinal	<i>Cardinalis cardinalis</i>
Pileated Woodpecker	<i>Dryocopus pileatus</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Timber Rattlesnake	<i>Crotalus horridus</i>
Tufted Titmouse	<i>Baeolophus bicolor</i>
Turkey Vulture	<i>Cathartes aura</i>
White-tailed Deer	<i>Odocoileus virginianus</i>
Wild Turkey	<i>Meleagris gallopavo</i>
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>

# ARCHAEOLOGICAL REPORT

## TN DIVISION OF ARCHAEOLOGY LETTER ON ARCHAEOLOGY DATABASE

- According to Mark Norton, State Programs Archaeologist, there are no recorded archaeology sites on the Little Pumpkin Creek North property.

11/7/2016

Conservation Ecology LLC Mail - RE: Archaeology Reports



Christopher Wilson <chris@conservationecologyllc.com>

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**RE: Archaeology Reports**

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**Mark Norton** <Mark.Norton@tn.gov>  
To: Christopher Wilson <chris@conservationecologyllc.com>

Tue, Oct 18, 2016 at 10:16 AM

Mr. Wilson,

I checked the 10 properties you submitted for technical assistance and only found 2 sites recorded within the boundaries. Sites 40HS126 and 40HS299 (see attached) –in the Brushy Hollow and Duck River properties. Thank you, Mark



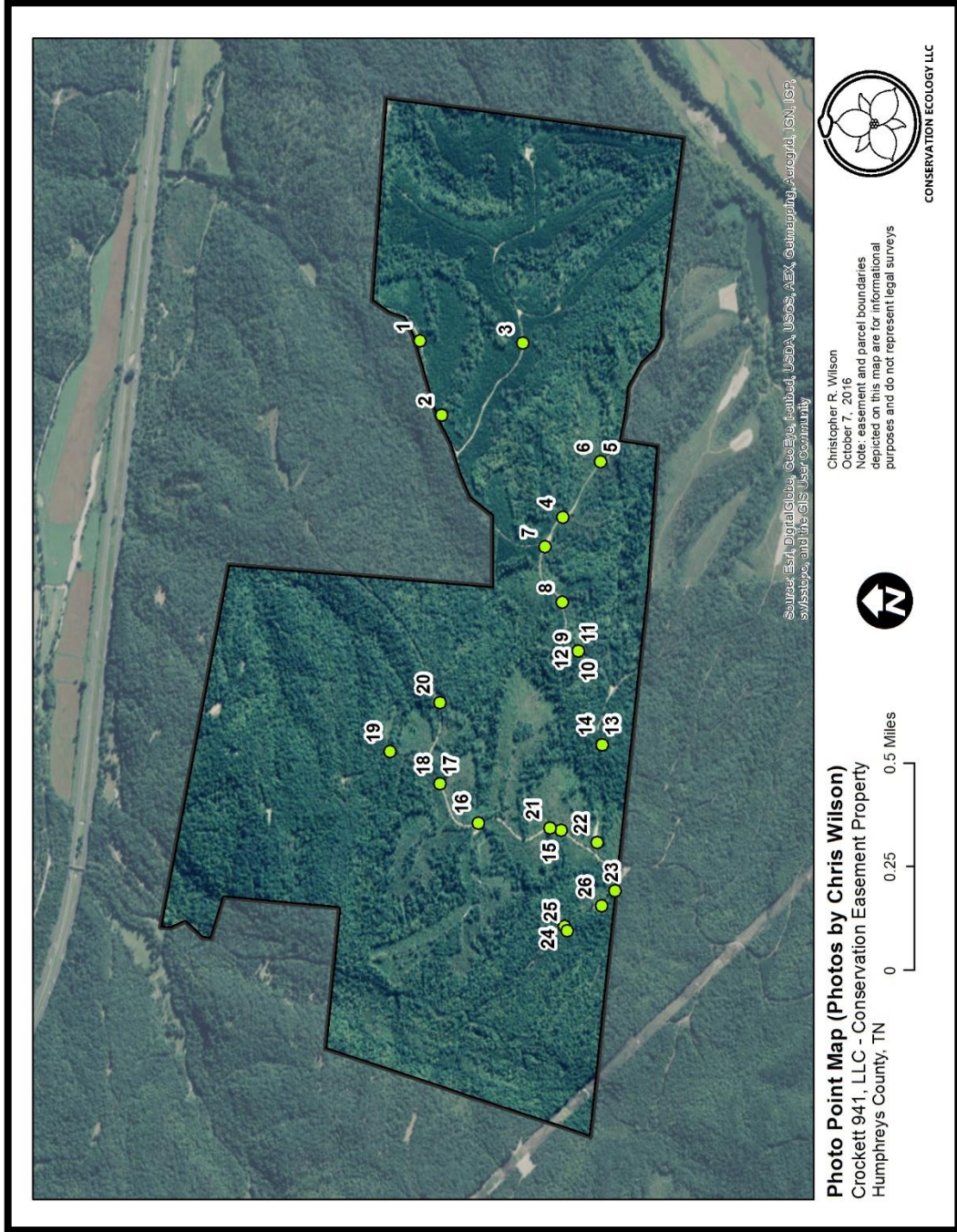
Mark Norton  
State Programs Archaeologist  
1216 Foster Avenue  
Cole Building #3  
Nashville, TN 37243  
Mark.norton@tn.gov  
P 615-741-1588, ext.113  
F 615-741-7329

---

**From:** Christopher Wilson [mailto:chris@conservationecologyllc.com]  
**Sent:** Friday, October 14, 2016 3:44 PM  
**To:** Mark Norton  
**Subject:** Archaeology Reports

**PHOTOGRAPHS OF CURRENT SITE CONDITIONS (Set 1 of 2)**  
**By Christopher R. Wilson**

**PHOTO POINT MAP**



# **PHOTOGRAPHS**

CROCKETT 941, LLC Conservation Property

Taken by

Christopher R. Wilson



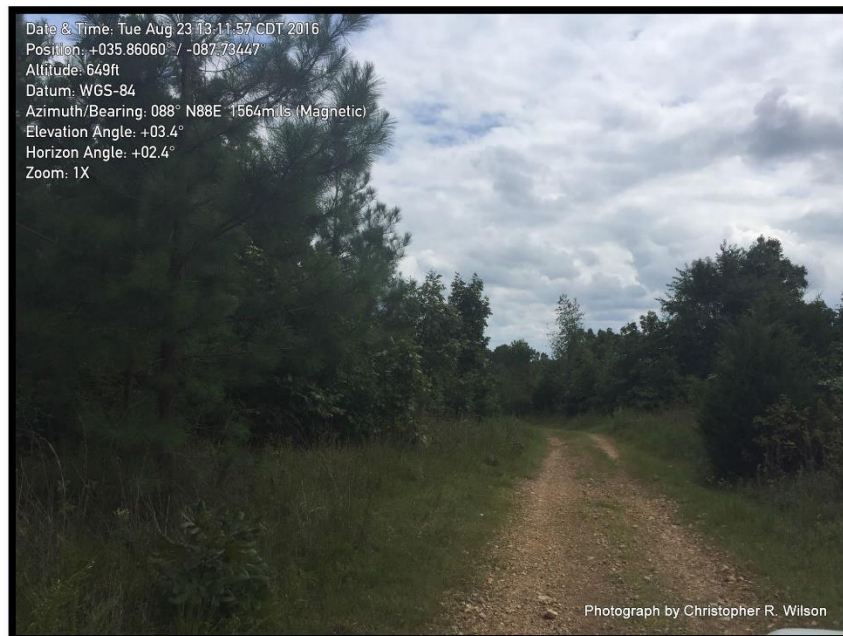
1 - Forest Road & young forest



2 - Mixed Forest



3 - Forest road through planted pine



4 - Forest road through planted pine



5 - Forest road through planted pine

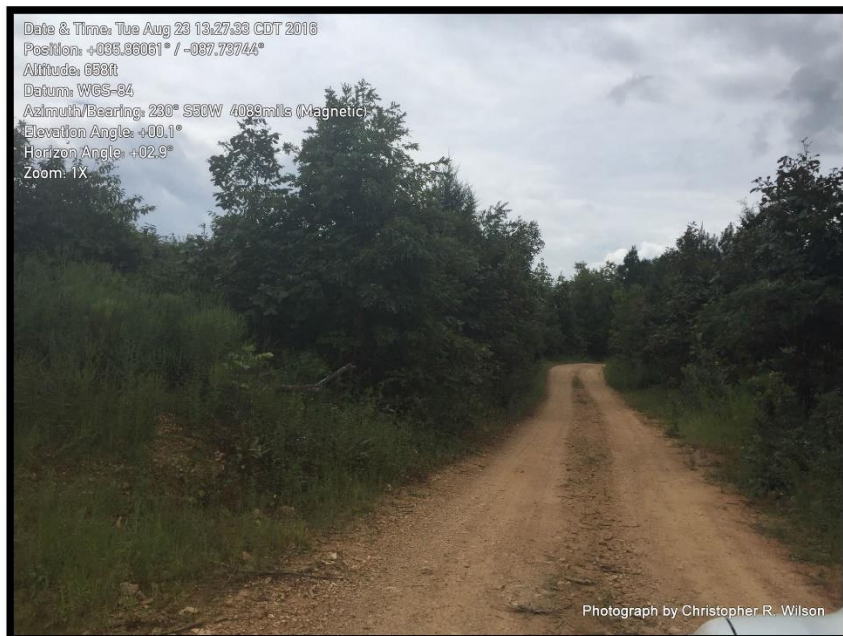


6 - Planted pine

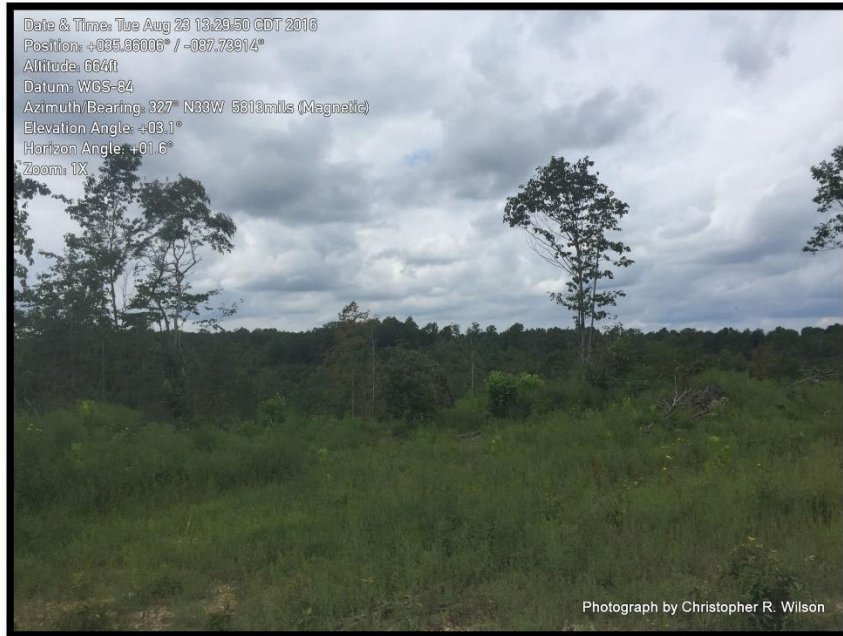




7 - Old log landing



8 - Forest road



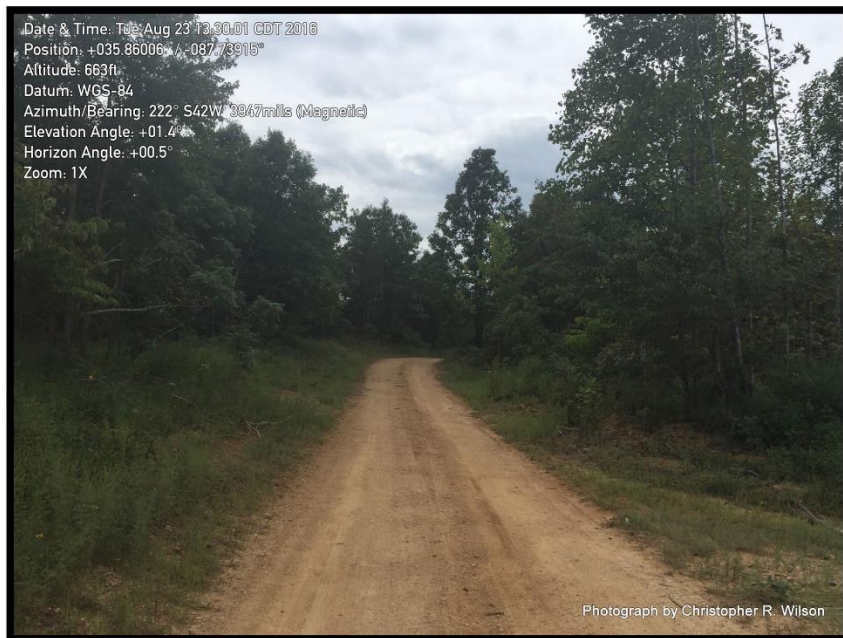
9 - Old clearing



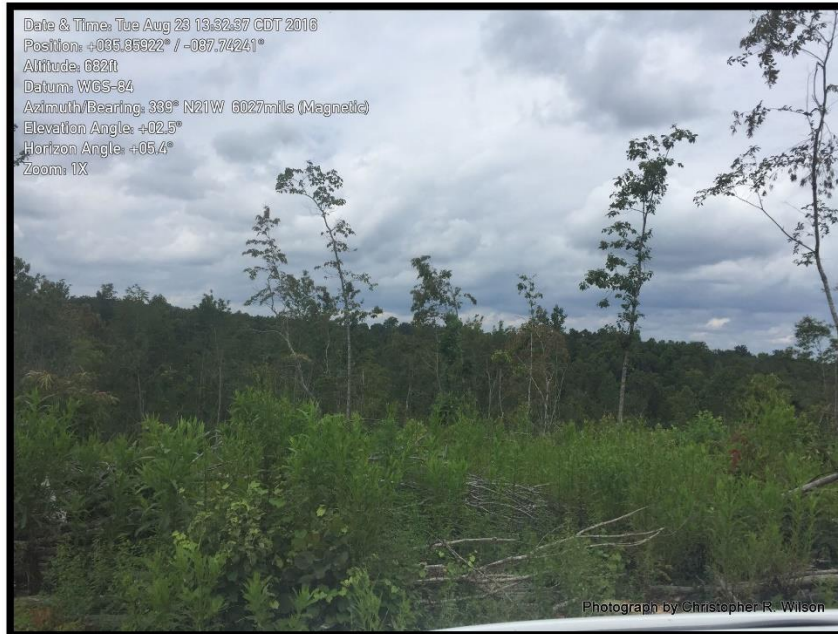
10 - Opening



11 - Forest road



12 - Forest road



13 - Old clearcut



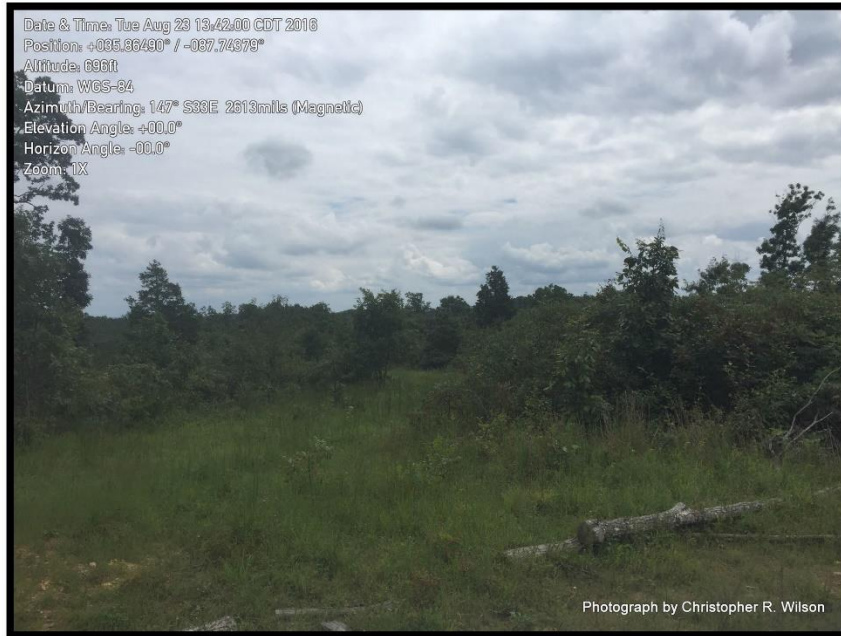
14 - Old clearcut



15 - Old clearing with temporary structures



16 - Old clearing



17 - Old clearcut



18 - Forest road through old clearcut



19 - Thinned forest



20 - Old log landing

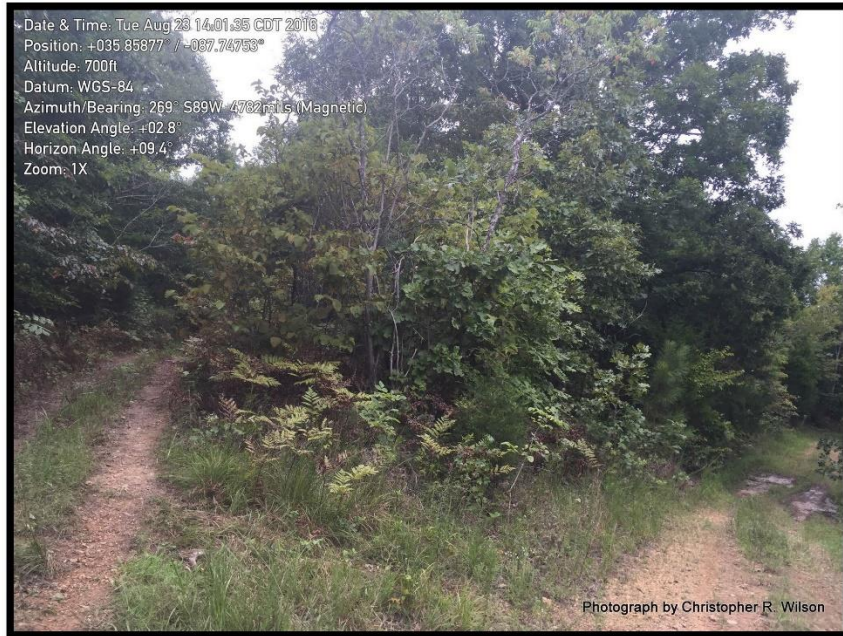


21 - clearing with temp structures



22 - meadow with hunting blind





23 - Old forest roads



24 - Young forests



25 - Young forest

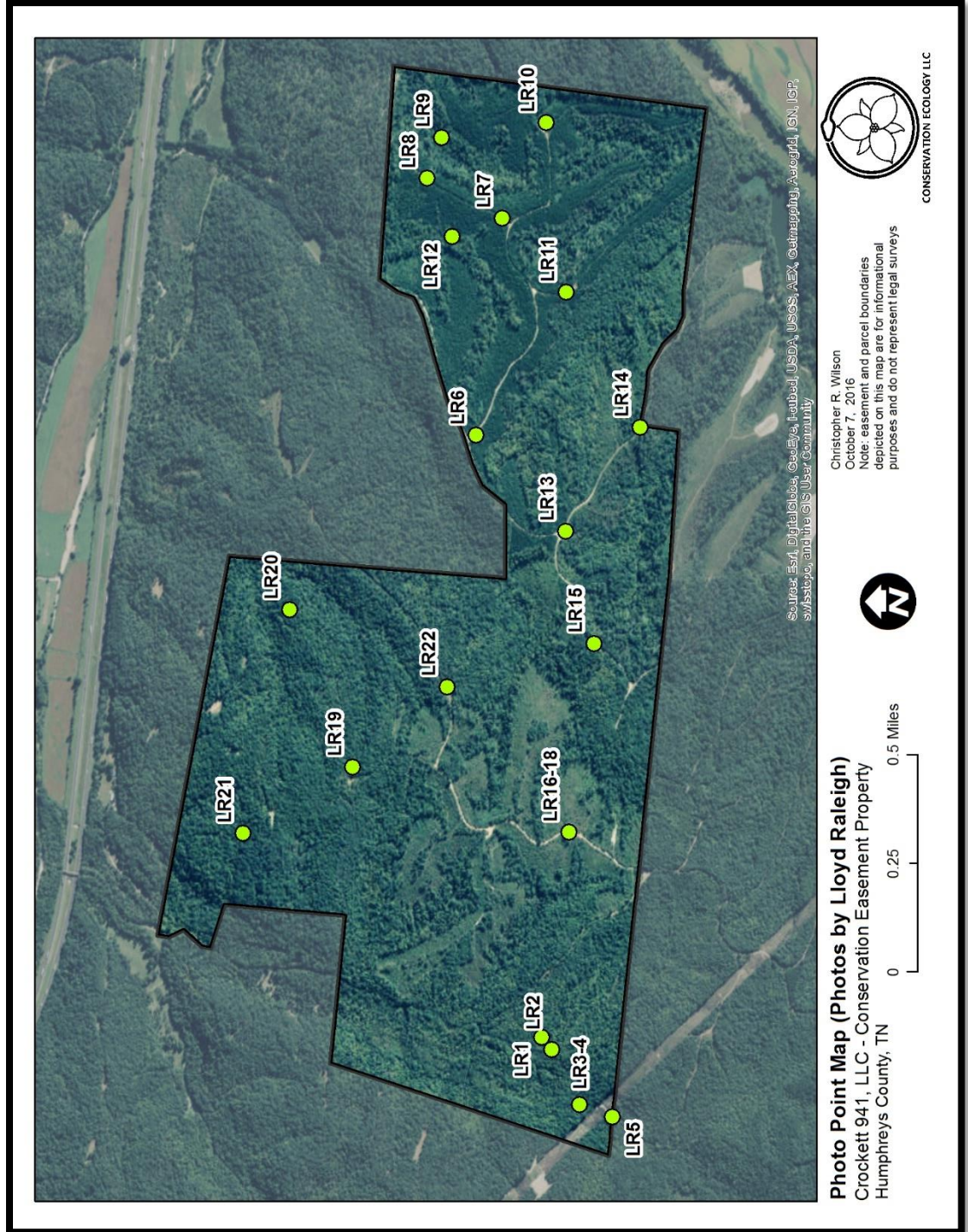


26 - Old clearcut

# PHOTOGRAPHS OF CURRENT SITE CONDITIONS (Set 2 of 2)

By Lloyd Raleigh

## PHOTO POINT MAP



## **PHOTOGRAPHS**

CROCKETT 941, LLC Conservation Property

Taken by

Lloyd Raleigh



1 – Hunting stand and successional forest. Photograph by Lloyd Raleigh



2 – Old hunting stand. Photograph by Lloyd Raleigh



3 - White Oak-Mixed Oak Dry-Mesic Alkaline Forest. Photograph by Lloyd Raleigh



4 - White Oak-Mixed Oak Dry-Mesic Alkaline Forest. Photograph by Lloyd Raleigh



5 – White Oak-Mixed Oak Dry-Mesic Alkaline Forest. Photograph by Lloyd Raleigh



6 – Logging road and loblolly forest. Photograph by Lloyd Raleigh



7 – Loblolly plantation. Photograph by Lloyd Raleigh



8 – Hunting stand and loblolly. Photograph by Lloyd Raleigh





9 – Early successional forest. Photograph by Lloyd Raleigh



10 – Hunting blind, feeder, food plot, loblolly. Photograph by Lloyd Raleigh



11 – Loblolly Plantation. Photograph by Lloyd Raleigh



12 – Three-birds orchid in successional forest. Photograph by Lloyd Raleigh



13 – Logging road and loblolly forest (4" dbh). Photograph by Lloyd Raleigh



14 – Successional forest--leave trees to 16" dbh. Photograph by Lloyd Raleigh



15 – Clearcut. Photograph by Lloyd Raleigh



16 – Camper near logging road. Photograph by Lloyd Raleigh



17 – Camper. Photograph by Lloyd Raleigh



18 Small structure in camp area. Photograph by Lloyd Raleigh



19 – Clearcut. Photograph by Lloyd Raleigh



20 – Dry-Mesic Alkaline Forest. Photograph by Lloyd Raleigh



21 –Alkaline Forest with tulip poplar to 45” dbh. Photograph by Lloyd Raleigh

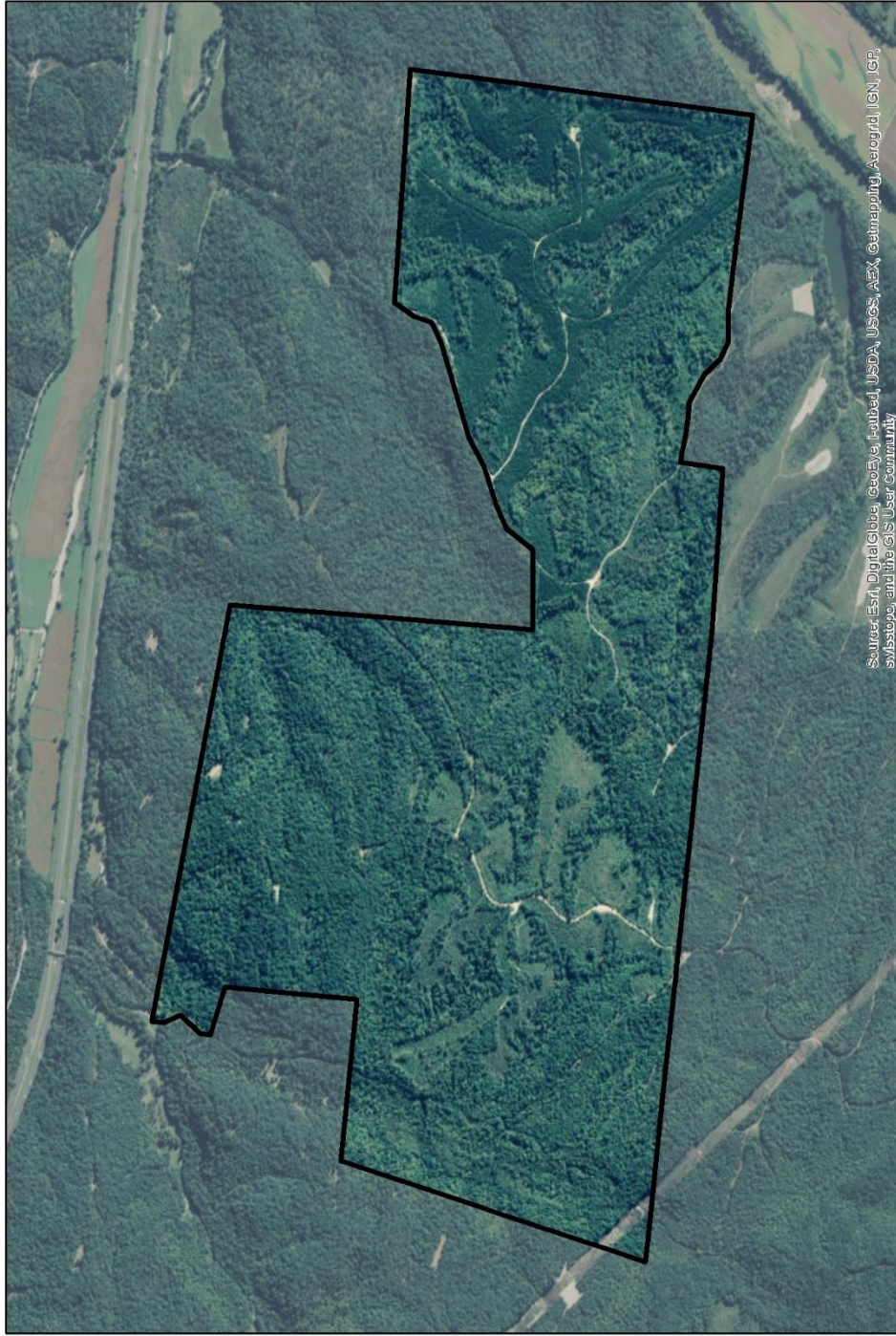


22 – Logging road and leave trees/successional. Photograph by Lloyd Raleigh

## **MAPS**

- Aerial Photograph with Boundaries
- State Map
- County Map
- USGS Quadrangle Map
- Wetlands, Streams, & Watersheds Map
- Soils Map with Descriptions & Prime Agricultural Soils
- Sub-surface Geology and Legend
- Land Use Map
- Survey of Deed with Home Site Locations
- Conservation Management Areas Map
- Anthropogenic Features Map
- Protected Areas & Ecoregional Portfolio Areas Map
- TN State Wildlife Action Plan Map
- Climate Resilience Map
- Natural Communities Map





Source: Esri, DigitalGlobe, GeoEye, Earthstar, USDA, USGS, AeroGRID, IGN, IGP, Swisstopo, and the GIS User Community

Christopher R. Wilson  
October 7, 2016

Note: easement and parcel boundaries depicted on this map are for informational purposes and do not represent legal surveys



CONSERVATION ECOLOGY LLC



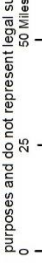
**Aerial Photograph With Boundaries**  
Crockett 941, LLC - Conservation Easement Property  
Humphreys County, TN



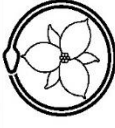
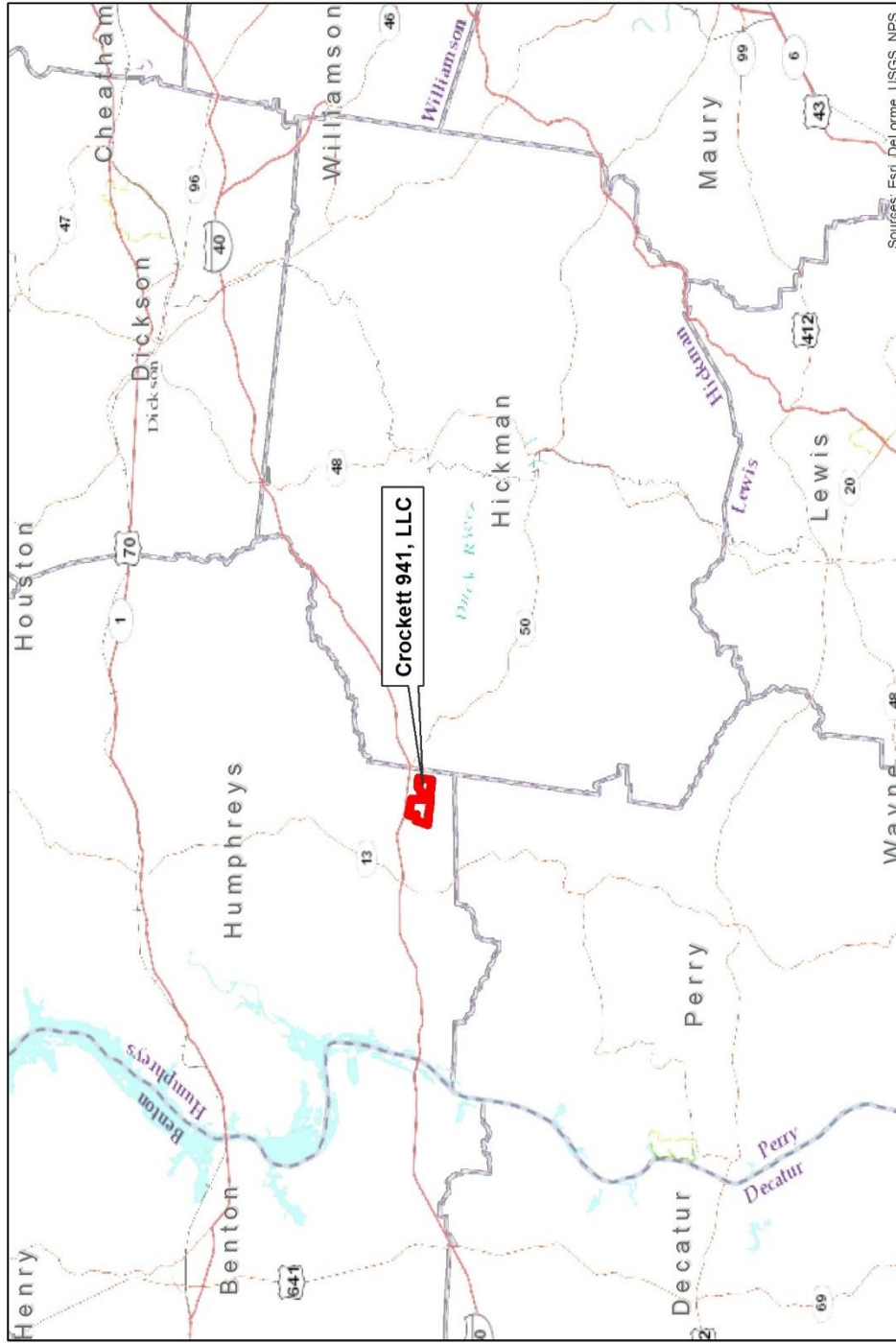
CONSERVATION ECOLOGY LLC

Christopher R. Wilson  
October 7, 2016

Note: easement and parcel boundaries depicted on this map are for informational purposes and do not represent legal surveys



**State Map**  
Crockett 941, LLC - Conservation Easement Property  
Humphreys County, TN

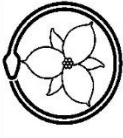
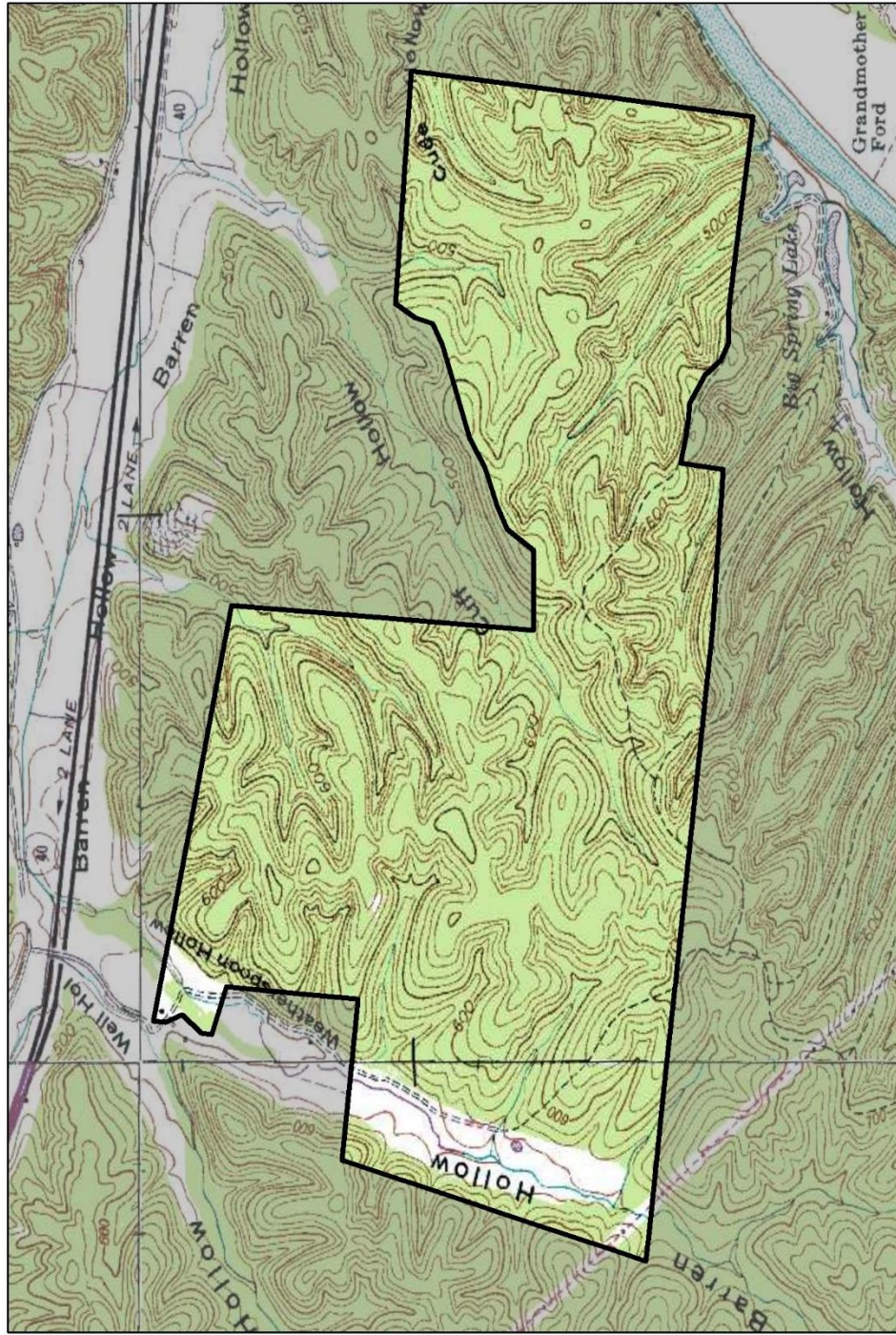


Christopher R. Wilson  
 October 7, 2016  
 Note: easement and parcel boundaries  
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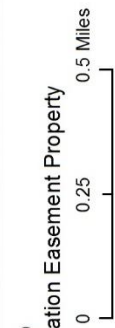
CONSERVATION ECOLOGY LLC

**County Map**  
 Crockett 941, LLC - Conservation Easement Property  
 Humphreys County, TN

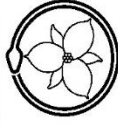
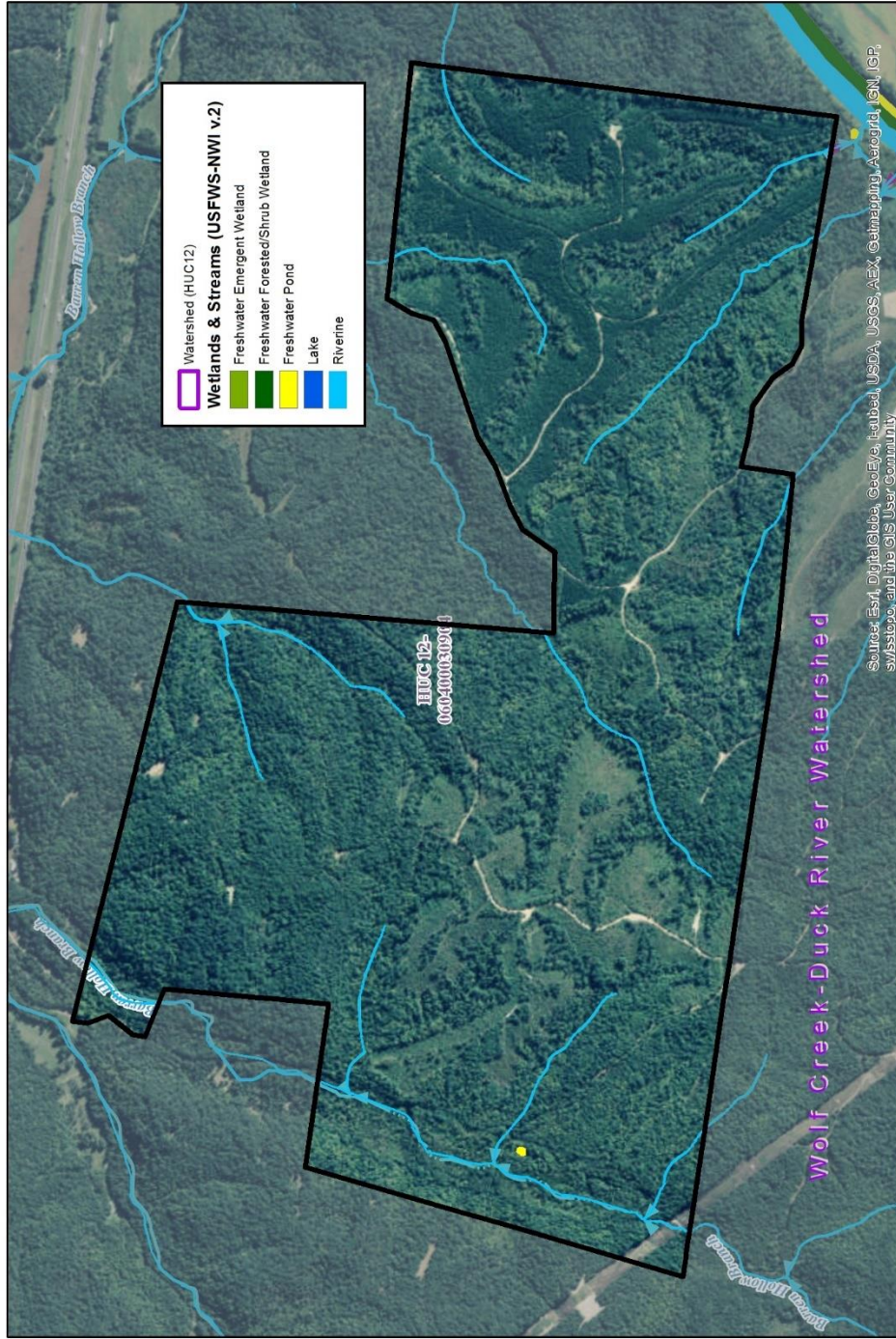


CONSERVATION ECOLOGY LLC

Christopher R. Wilson  
 October 7, 2016  
 Note: easement and parcel boundaries  
 depicted on this map are for informational  
 purposes and do not represent legal surveys



**USGS Quadrangle Map**  
 Crockett 941, LLC - Conservation Easement Property  
 Humphreys County, TN



CONSERVATION ECOLOGY LLC

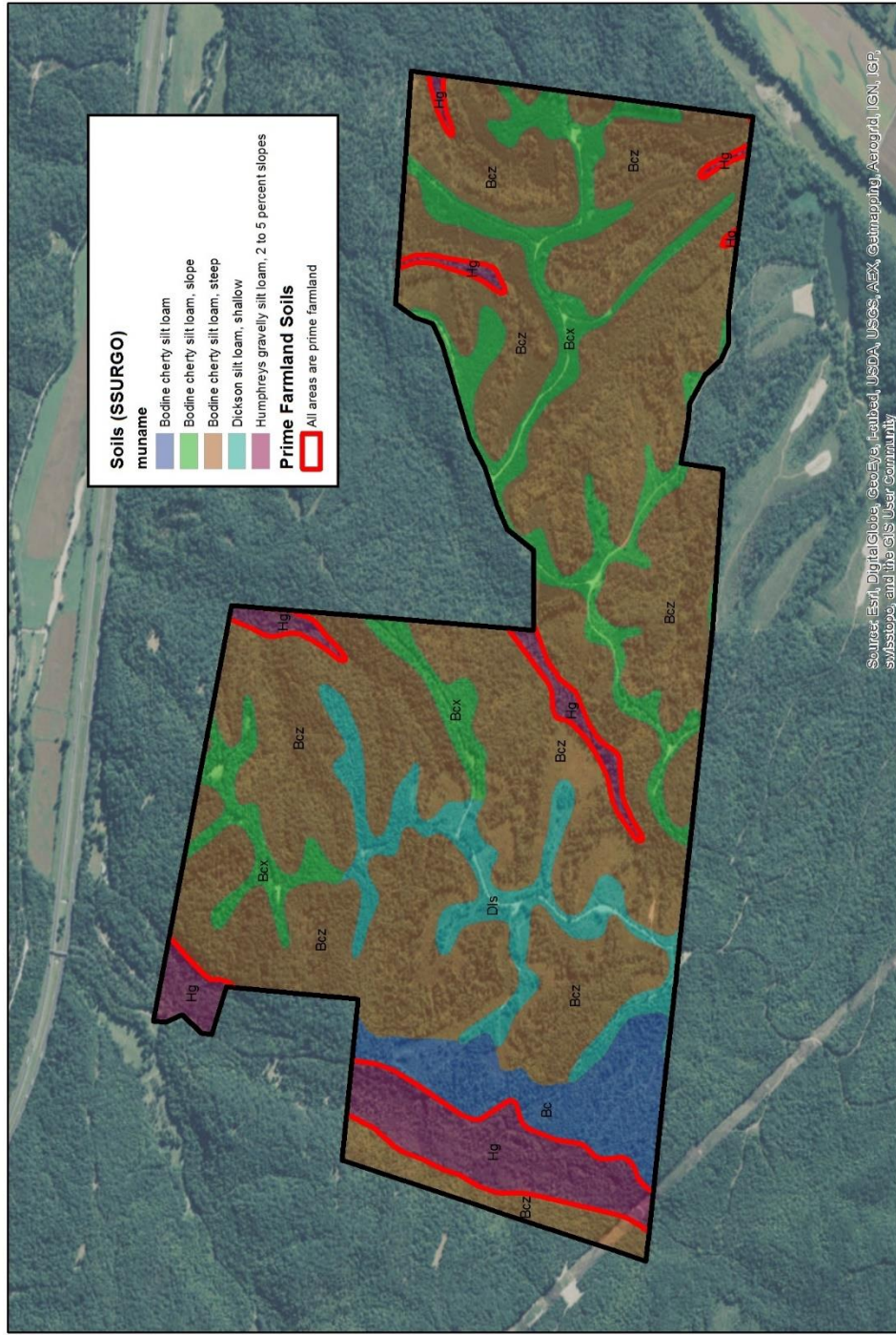
Christopher R. Wilson  
October 7, 2016

Note: easement and parcel boundaries depicted on this map are for informational purposes and do not represent legal surveys



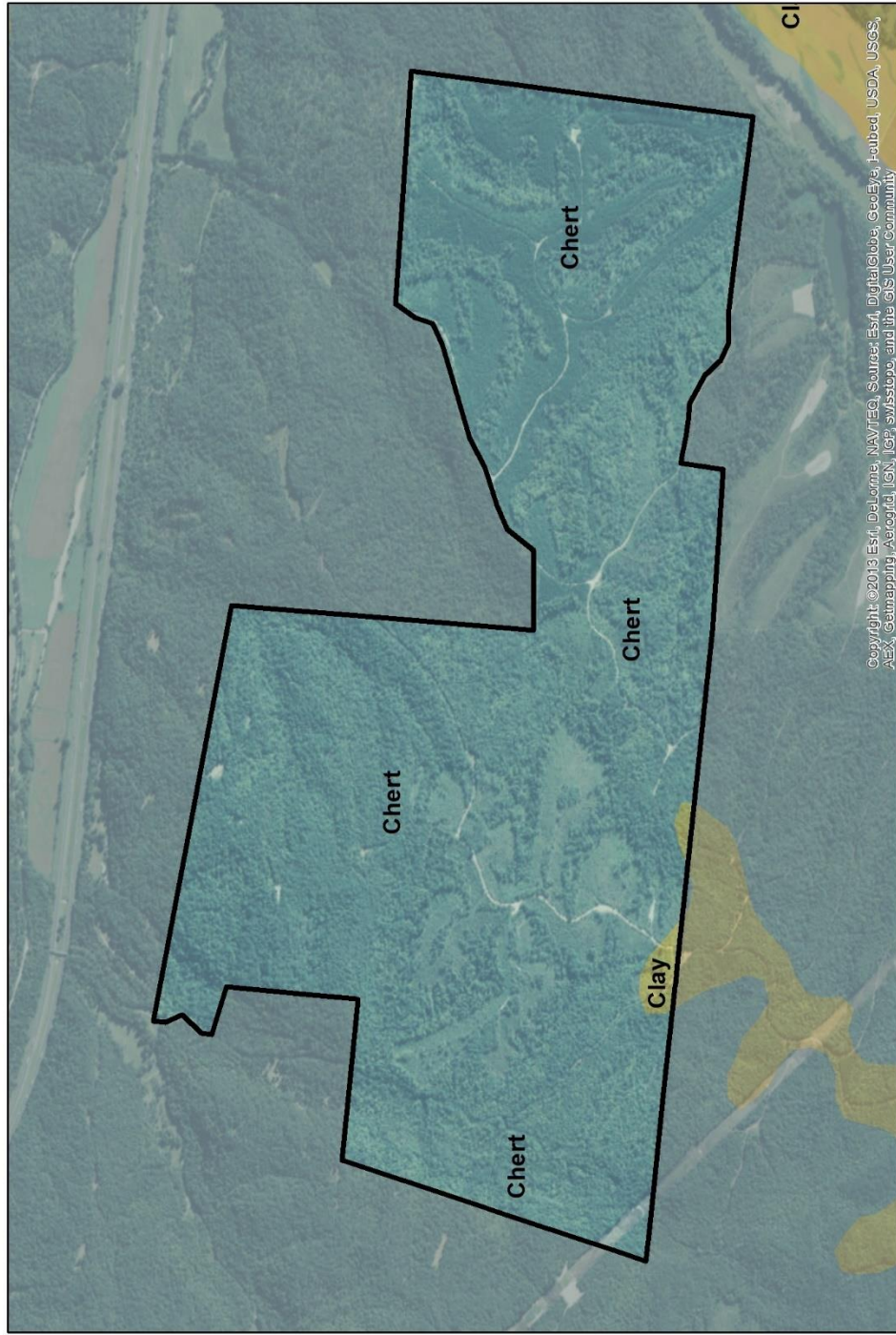
**Wetlands, Streams, & Watersheds Map (USFWS-NWI v.2)**

Crockett 941, LLC - Conservation Easement Property  
Humphreys County, TN



**Soils Map With Descriptions & Prime Agricultural Soils**

Crockett 941, LLC - Conservation Easement Property  
Humphreys County, TN

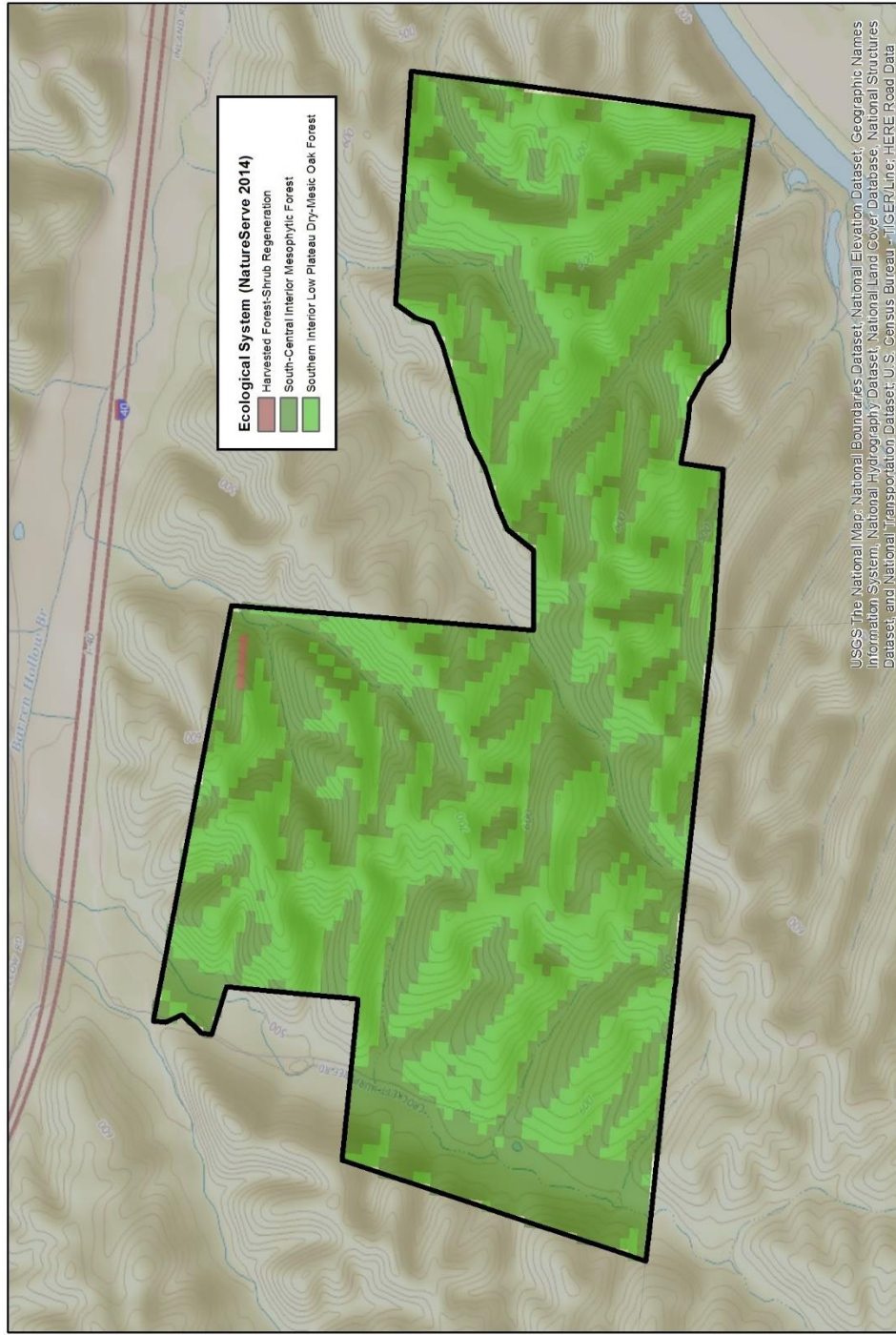


Christopher R. Wilson  
 October 7, 2016  
 Note: easement and parcel boundaries  
 depicted on this map are for informational  
 purposes and do not represent legal surveys  
 0 0.25 0.5 Miles



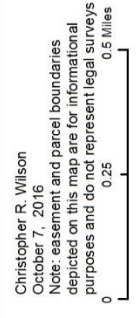
**Sub-surface Geology and Legend (USGS)**  
 Crockett 941, LLC - Conservation Easement Property  
 Humphreys County, TN  
 USGS Mineral Resources Program

**Sub-surface Geology and Legend (USGS)**  
 Crockett 941, LLC - Conservation Easement Property  
 Humphreys County, TN



USGS The National Map, National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line; HERE Road Data

Christopher R. Wilson  
 October 7, 2016  
 Note: easement and parcel boundaries depicted on this map are for informational purposes and do not represent legal surveys



Terrestrial Ecological Systems of the United States  
 NatureServe (2014)

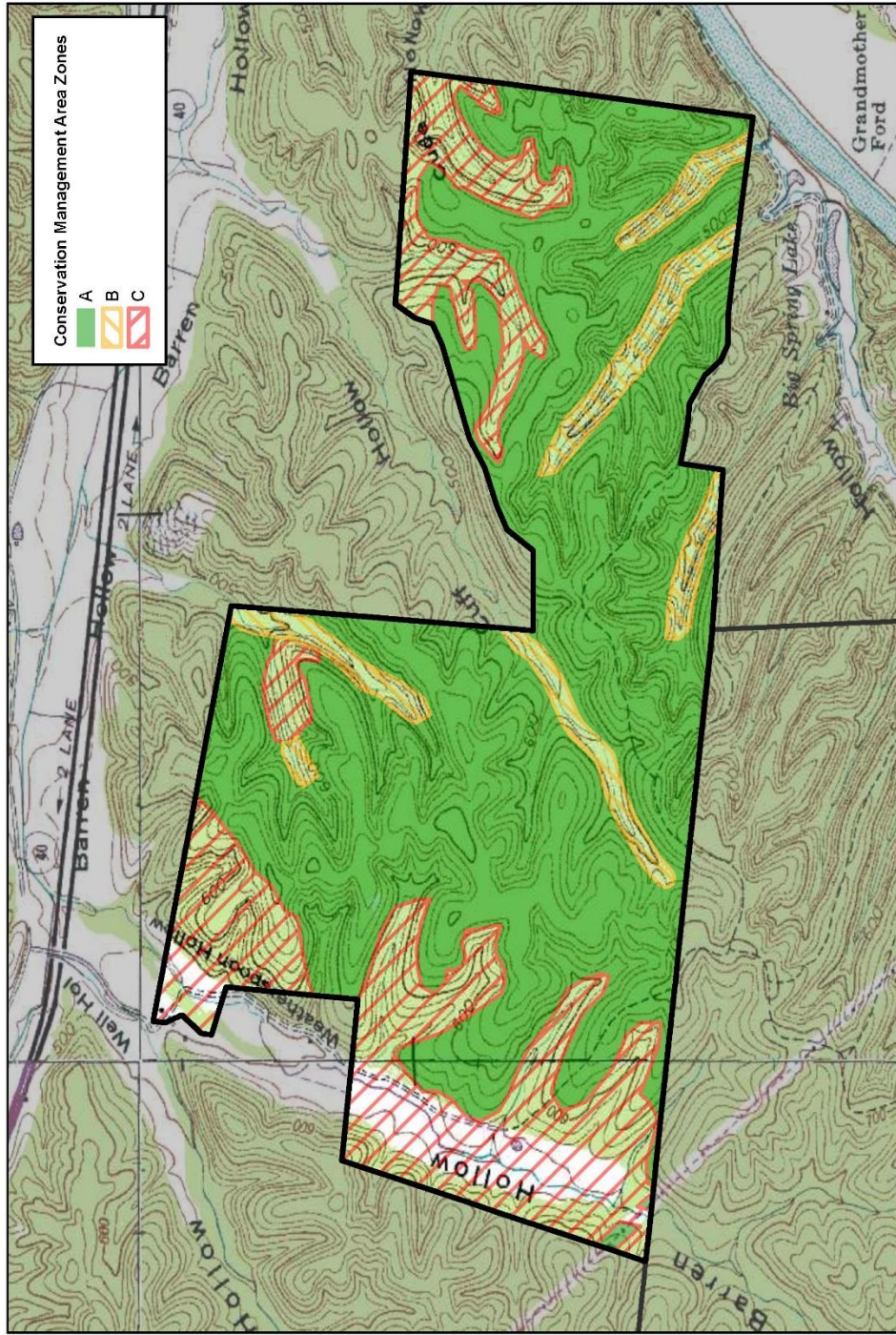
**Land Use Map (NatureServe 2014)**  
 Crockett 941, LLC - Conservation Easement Property  
 Humphreys County, TN



CONSERVATION ECOLOGY LLC

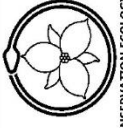






**Conservation Management Area Zones**

- A ■
- B ■
- C ■



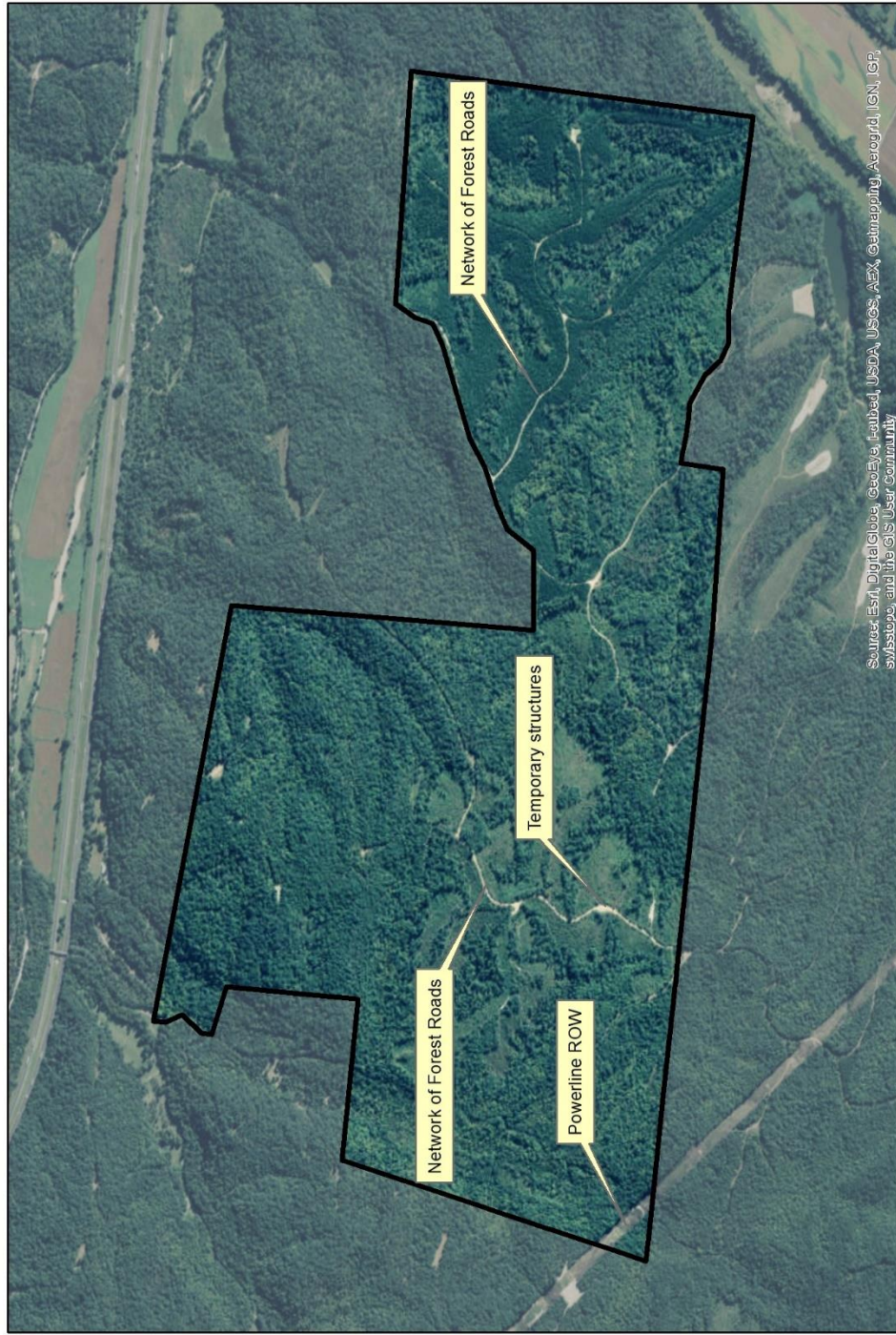
CONSERVATION ECOLOGY LLC

Christopher R. Wilson  
December 5, 2018

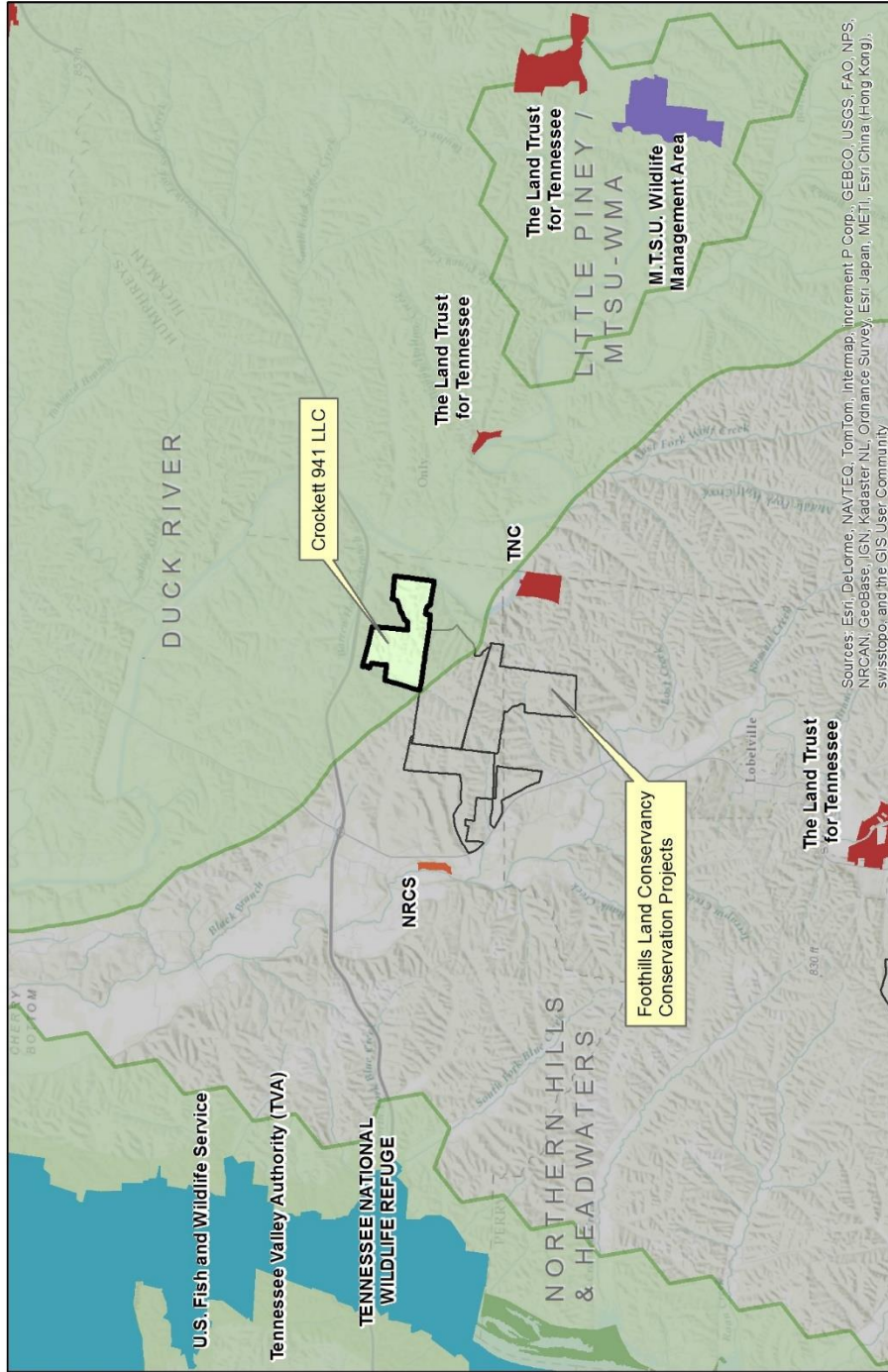
Note: easement and parcel boundaries depicted on this map are for informational purposes and do not represent legal surveys



**Conservation Management Areas Map**  
Crockett 941, LLC - Conservation Easement Property  
Humphreys County, TN



**Antropogenic Features Map**  
 Crockett 941, LLC - Conservation Easement Property  
 Humphreys County, TN



Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, Inetang, P. Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, MEI, Esri China (Hong Kong), Swisstopo, and the GIS User Community

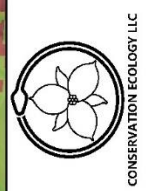
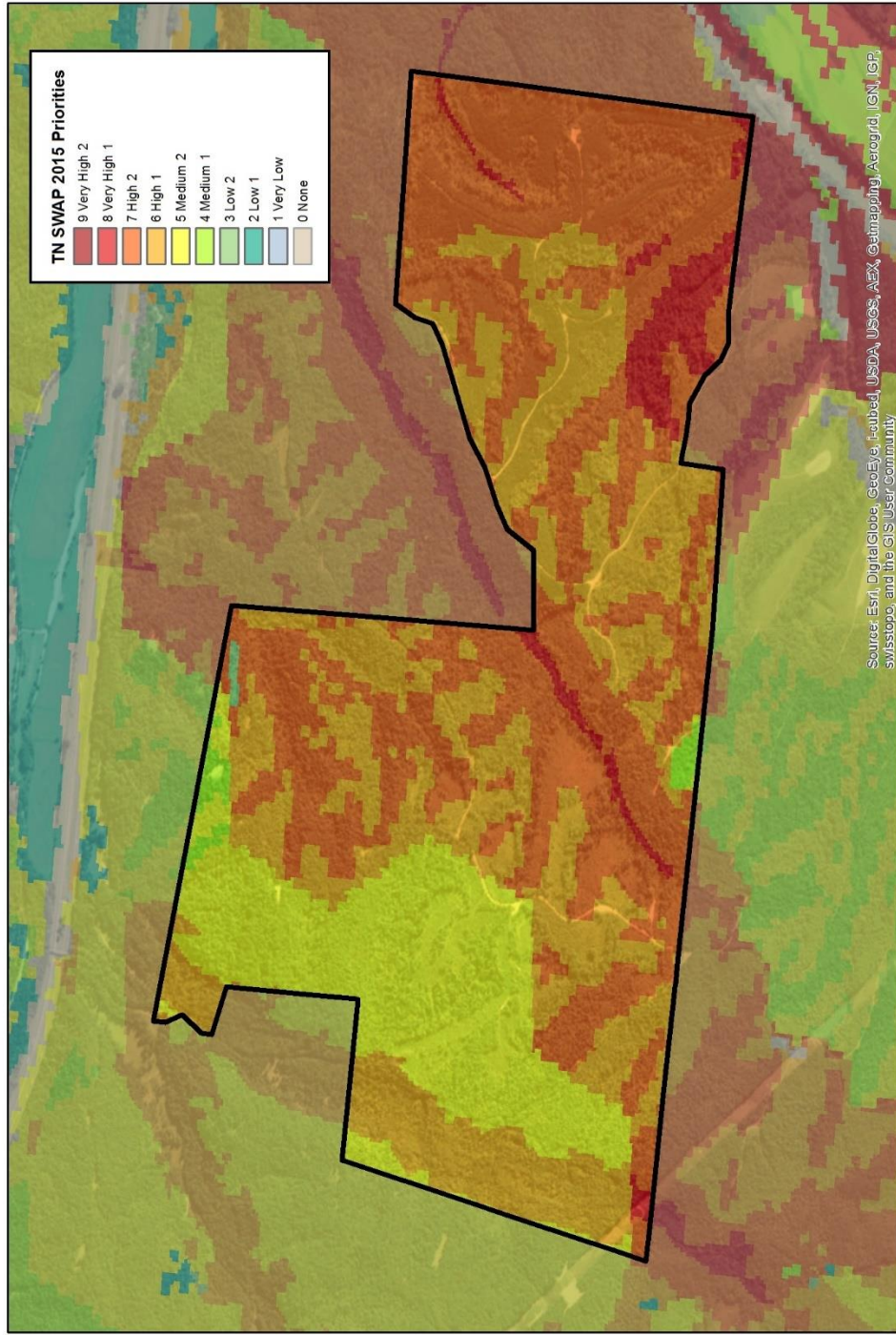


Christopher R. Wilson  
 October 7, 2016  
 Note: easement and parcel boundaries depicted on this map are for informational purposes and do not represent legal surveys



**Protected Areas & Ecoregional Portfolio Areas Map (USGS-PAD; TNC 2003)**  
 Crockett 941, LLC - Conservation Easement Property  
 Humphreys County, TN  
 Source: The Nature Conservancy's 2003 Ecoregional Assessment for the Upper East Gulf Coastal Plain; USGS-Protected Areas Database

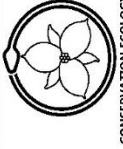
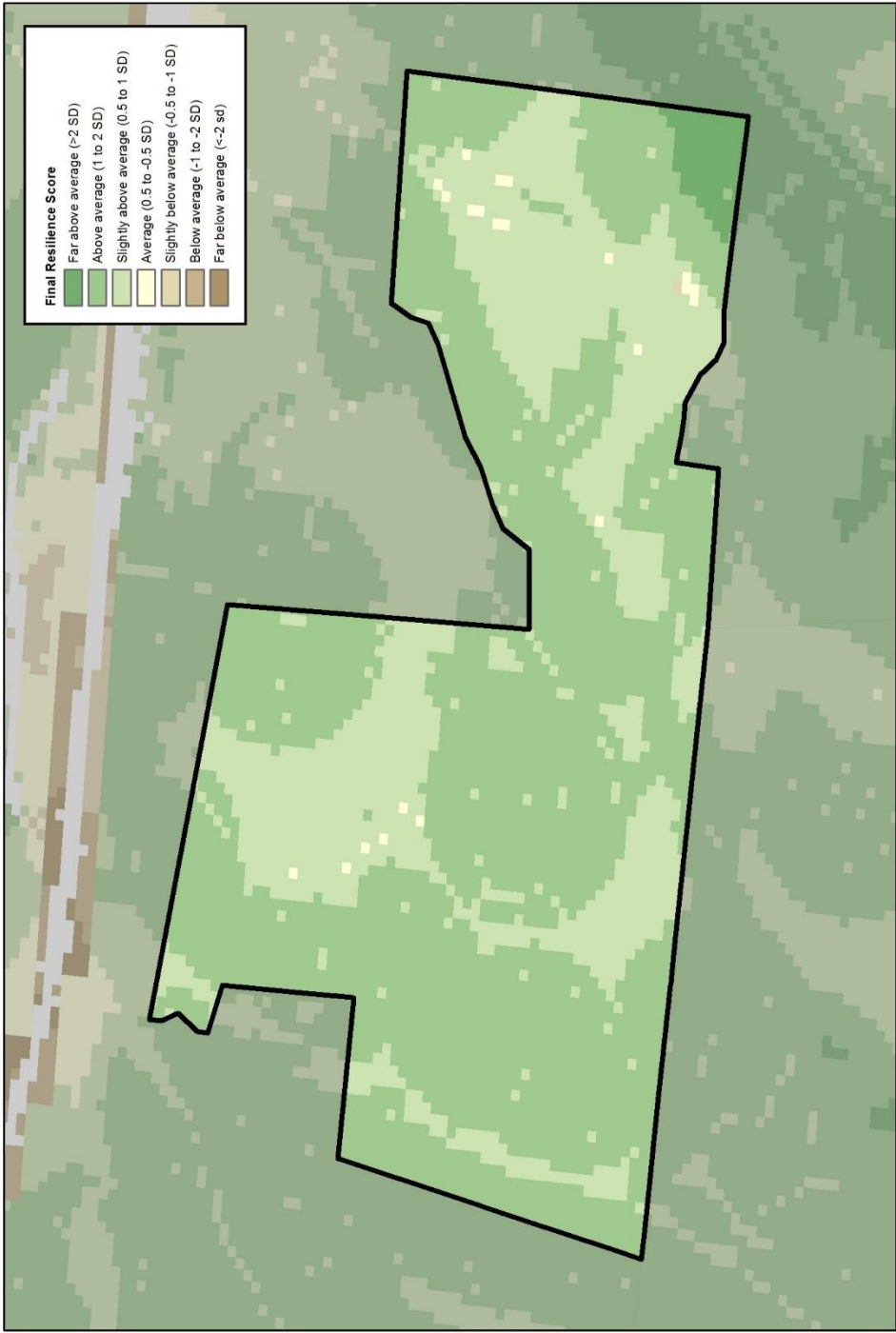
CONSERVATION ECOLOGY LLC



**TN State Wildlife Action Plan Map (2015)**  
Crockett 941, LLC - Conservation Easement Property  
Humphreys County, TN



TN SWAP 2015 Combined Conservation Priorities for Terrestrial, Downstream Aquatic, and Nearby Karst Habitats



CONSERVATION ECOLOGY LLC

Christopher R. Wilson  
October 7, 2016

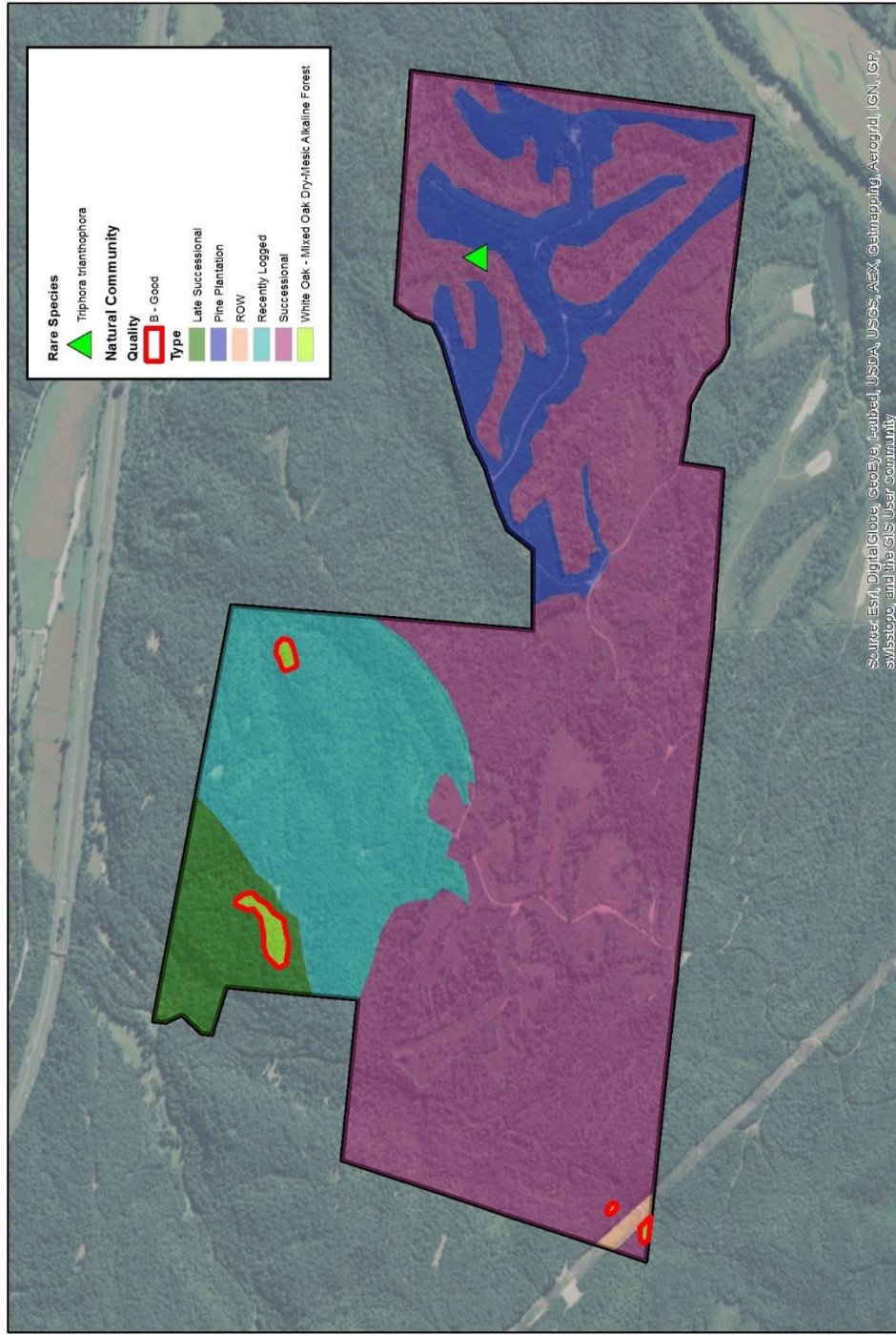
Note: easement and parcel boundaries depicted on this map are for informational purposes and do not represent legal surveys



Anderson, M.G et al. 2014. Resilient Sites for Terrestrial Conservation in the Southeast Region. The Nature Conservancy Eastern Conservation Science. 127 pp.

**Climate Resilience Map (TNC 2014)**

Crockett 941, LLC - Conservation Easement Property  
Humphreys County, TN

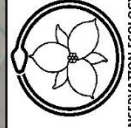


**Natural Communities Map - Type & Quality**  
 Crockett 941, LLC - Conservation Easement Property  
 Humphreys County, TN

Natural communities identified and mapped in the field  
 by Lloyd Ralleggh - August 2016



Christopher R. Wilson  
 October 7, 2016  
 Note: easement and parcel boundaries  
 depicted on this map are for informational  
 purposes and do not represent legal surveys



CONSERVATION ECOLOGY LLC

## **DIRECTIONS TO PROPERTY**

Coordinates for entrance: 35.854578, -87.749493

Can be access through the Little Pumpkin North and South, and Ginn properties

3 h 57 min (249 miles) via I-40 W

From Maryville, TN to Crockett Murphree Road, Hurricane Mills, TN 37078

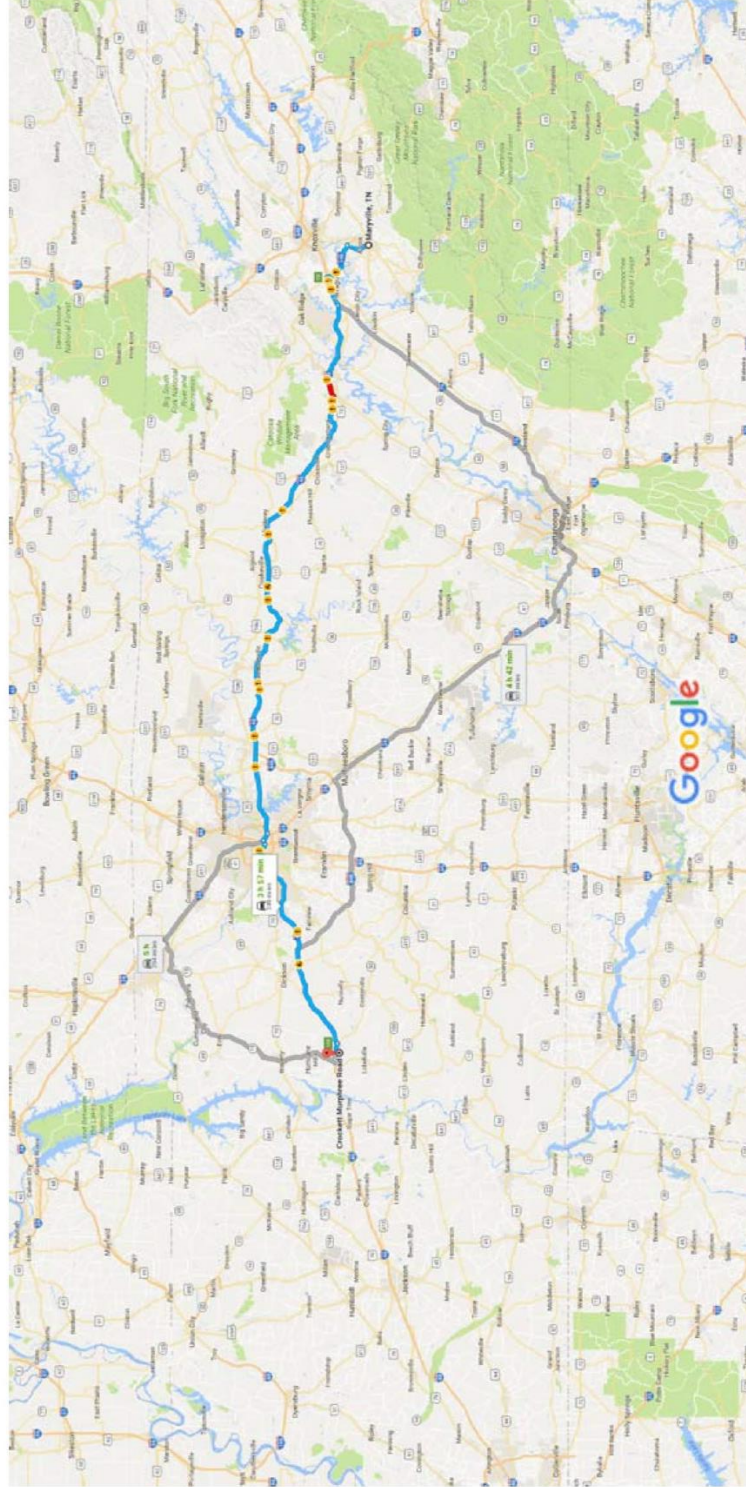
- Get on I-140 W in Alcoa from S Hall Rd and US-129 N - 10 min (6.5 mi)
- Follow I-40 W to Barren Hollow Rd/Duck River Rd in Hickman County. Take exit 148 from I-40 W - 3 h 27 min (239 mi)
- Continue on Barren Hollow Rd. Drive to Crockett Murphree Rd in Humphreys County - 7 min (3.1 mi)



Google Maps

Maryville, TN to Crockett Murphree Road

Drive 249 miles, 3 h 57 min



Map data ©2016 Google 10 mi

## REFERENCES

All references accessed between September and December 2016

Anderson, M.G., A. Barnett, M. Clark, C. Ferree, A. Olivero Sheldon, and J. Prince. 2014. Resilient Sites for Terrestrial Conservation in the Southeast Region. The Nature Conservancy, Eastern Conservation Science. 127 pp.  
<https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/terrestrial/resilience/se/Pages/default.aspx>

Ecoregional Assessments - The Nature Conservancy.  
<https://www.conservationgateway.org/ConservationPlanning/SettingPriorities/EcoregionalReports/Pages/EastData.aspx>

FEMA - National Flood Hazard Layer (NFHL) Database.  
<https://www.fema.gov/national-flood-hazard-layer-nfhl>

NatureServe. 2006. International Ecological Classification Standard: Terrestrial Ecological Classifications. NatureServe Central Databases. Arlington, VA, U.S.A. Data current as of 18 July 2006. Descriptions of Ecological Systems for Modeling of LANDFIRE Biophysical Settings Ecological Systems of location US State TN ; Excluding Aggregates 18 July 2006. Descriptions provided to TNC and LANDFIRE by NatureServe. <http://www.natureserve.org/conservation-tools/terrestrial-ecological-systems-united-states>

The Nature Conservancy's 2003 Ecoregional Assessment for the Upper East Gulf Coastal Plain.  
<https://www.conservationgateway.org/ConservationPlanning/SettingPriorities/EcoregionalReports/Documents/Upper%20East%20Gulf%20Coastal%20Plain%20Ecoregional%20Assessment.pdf>

TN Natural Heritage Program Database – TN Department of Environment & Conservation. <https://www.tn.gov/environment/article/na-natural-heritage-inventory-program>

TN State Wildlife Action Plan- TN Wildlife Resources Agency.  
<http://www.tnswap.com/>

USGS Mineral Resources Program. <http://minerals.usgs.gov/>

USDS-NRCS SSURGO. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/>.

USGS-Protected Areas Database. <http://gapanalysis.usgs.gov/padus/>

## PREPARER QUALIFICATIONS AND CONTRUBUTIONS

### Christopher R. Wilson

**Contribution:** Chris led fieldwork and reporting. He inspected the property, assessed wildlife habitat conditions, produced a photo-graphic document, created the maps (unless otherwise noted) and assembled the final report.

**Qualifications:** Chris is owner/ principle of the company Conservation Ecology LLC, based in Hendersonville, NC. He holds a BS&A in Wildlife Ecology and Conservation Biology from the Evergreen State College in Olympia, WA, and an MSc in Biology from Appalachian State University in Boone, NC. He is a conservation scientist and wildlife ecologist and has held science and stewardship positions with Sweet Water Trust, Santa Lucia Conservancy, and North American Land Trust. He is author of the book *Documenting and Protecting Biodiversity on Land Trust Projects* published by the Land Trust Alliance.

### Meredith Clebsch

**Contribution:** Meredith provided oversight of document development.

**Qualifications:** Meredith's formal education includes a BS degree in Animal Science from Clemson University with minors in Horticulture and Wildlife Biology. She also completed a number of graduate and undergraduate level courses at the University of TN in botany, ecology, horticulture and wildlife biology. For 25 years she owned and operated a successful native plant nursery, which included consultation and design services involving considerable field work in plant identification and landscapes interpretation. She has attended many field botany and ecology study classes and assisted in gathering and interpreting data for a number of projects associated with plant ecology.

Much of Meredith's recreational time is spent in outdoor recreation and pursuing nature study. She has worked for Foothills Land Conservancy since 2007, and has been Land Director since 2010, preparing and overseeing development of baseline documentation reports, drafting conservation easements, and monitoring easement properties. At present this includes approximately 200 properties in 7 states totaling nearly 100,000 acres. She has attended the Land Trust Alliance national meeting and training sessions in 2007, 2008, 2013, 2014 and also annual regional land trust meetings.

## **Lloyd Raleigh**

**Contribution:** Lloyd inspected the property, conducted a botanical and natural community inventory, created a photographic document, and produced related reporting and spatial data

**Qualifications:** Lloyd is owner of the company Helia Environmental LLC, based in Asheville, NC. In 1996, Lloyd received his master's degree in Forest Science (MFS) from the Yale School of Forestry and Environmental Studies with a focus in management planning and ecosystem management. He graduated in 1994 from the University of South Carolina, where he received a BA and a BS in interdisciplinary studies combining physical and biological sciences with writing and socioeconomics. He is a botanist, natural community ecologist, and forester (NC Registered Forester #1711).

## **BDR EXHIBITS**

(Electronic versions saved as independent files)

### **A. Conservation Easement**

**BDR EXHIBIT A**  
**CONSERVATION EASEMENT**