

Woodland Stewardship Management Plan

Owner's Information:

Owner: James A. Barkhurst

Sarah M. Barkhurst

Signed: James A. Barkhurst

Signed: Sarah M. Barkhurst

Date: July __, 2019

RECEIVED

MAY 06 2024

Preparer's Information:

Prepared by: Dean A. Berry

Jill Davidson
Athens County Auditor

Signature: Dean A. Berry

Woodland Management Services
c/o Dean A. Berry, Consulting Forester
10935 Rosewood Lane
Athens, Ohio 45701
TSP 10-6547

Date: July 10th, 2019
Field Inspection Date

740-541-4647 mobile
fatlabtreefarm@gmail.com

This plan is valid for the period beginning July 26th, 2019 and ending July 25th, 2029.

Plan Status: New

Inventory Method: On Site Property Review

Woodland Stewardship Management Plan

Owner	James A. and Sarah M. Barkhurst		
Address	12895 Mill Creek Rd.		
	Millfield, OH 45761		
Phone	Case Number		
Cell	614-961-0327	Email Address	jamesbarkhurst@yahoo.com
County	Athens	Township	Section 7 Dover Twp.
Parcel(s):	G010010032900, G010010032300, G010010002400, G010010002500, G010010002600		
Location:	Located along both sides of Mill Creek Rd and along east side of Liars Corner Rd., near St Rt 550		

Woodland Stewardship Acreage: 91.8 Non-woodland Stewardship Acreage*: 8.66
Total Property Acres 100.46 * Non-woodland acres for which stewardship recommendations are made. Stands - 3, 4, 5, 11 & 16

This plan was written to qualify the landowner's woodland for the programs checked below:

- | | |
|-------------------------------------------------------------------------------------|------------------------------------------------------|
| <input checked="" type="checkbox"/> Ohio Forest Tax Law | <input type="checkbox"/> American Tree Farm Program |
| <input checked="" type="checkbox"/> Environmental Quality Incentives Program (EQIP) | <input type="checkbox"/> CAUV Property Tax Reduction |

Property coordinates (report in WGS 84, decimal degrees.)

Latitude: 39.384700 Longitude: -82.09116

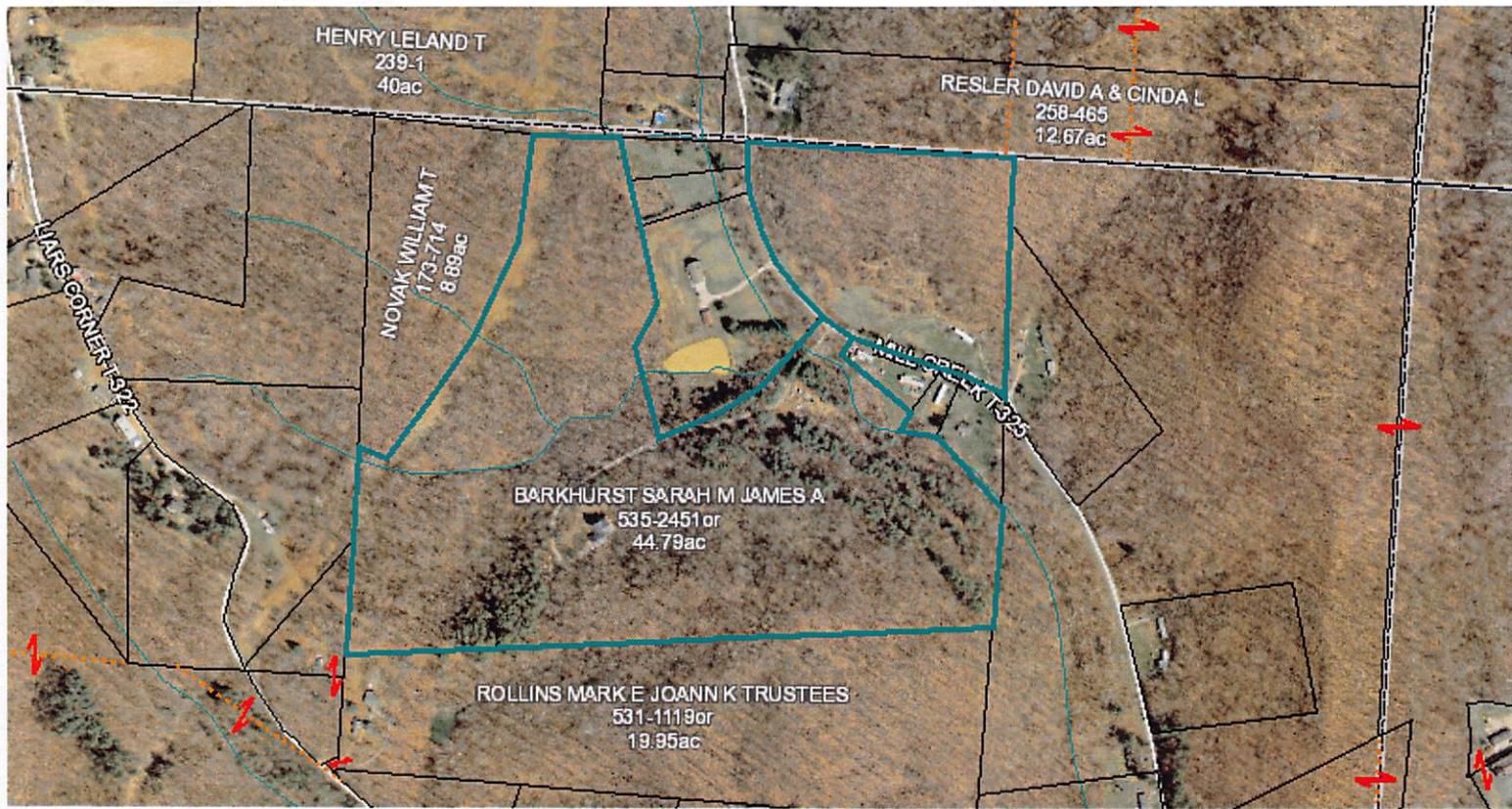
Landowner Management Objectives

1. Manage the property for all attributes and opportunities that exist in a forest ecosystem of interest to the owner including recreation, wildlife management, soil and water management, forest protection, timber products management, and other compatible conservation uses.
2. Improve the forested habitat to increase deer and other game animal populations.
3. Manage property for possible future planned timber sales.

General Woodland Description

Athens County is in the unglaciated hill country of southeastern Ohio. Slope and erosion hazard are the major land use limitations. Athens County is in the central hardwood forest region. Major forest types include Appalachian hardwoods, bottomland hardwoods, oak-hickory, successional, Virginia pine, and white pine plantations. Most of the woodland in Athens County is in areas of steep and very steep terrain. This is especially true for this farm.

The Barkhurst family has acquired the present-day ownership through three separate acquisitions. The first parcel was in 2010 then 2017 and the most recent purchase in 2019. The history of these tracts was agricultural use (pasturing sheep), so most of the present-day forest areas are still fairly young. The pioneer species of trees are slowly being replaced in the stand with intermittent and climax species, such as: Sugar Maple, Tulip Poplar and a mixture of Oak and Hickory species. A previous owner planted White Pines on the slope above Mill Creek. James & Sarah have built the house in which they currently reside in, on this farm.



**PARID: G010010032900
BARKHURST SARAH M**

12895 MILL CREEK RD

Parcel

Address	12895 MILL CREEK RD
Unit	
Class	A - AGRICULTURAL
Tax Roll	RP_OH
Land Use Code	101 - A - CASH GRAIN OR GENERAL FARM
Neighborhood	00023000 - G01
Total Acres	44.79
Taxing District	G01
District Name	DOVER TOWNSHIP
Gross Tax Rate	97.97
Effective Tax Rate	

Owner

Tax Year	2018
Owner	BARKHURST SARAH M JAMES A

Tax Mailing Name and Address

Mailing Name 1	BARKHURST SARAH M
Mailing Name 2	JAMES A
Address 1	12895 MILL CREEK RD
Address 2	
Address 3	MILLFIELD OH 45761
Mortgage Company	
Mortgage Company Name	
Treas Code	

Legal

Legal Desc 1	14-10-00 SEC 7 44.790A
Legal Desc 2	
Legal Desc 3	
Legal Acres	44.79

Homestead Credits

Homestead Exemption	NO
Owner Occupancy Reduction	YES

**PARID: G010010032300
SCHNEIDER JOHN W**

12888 MILL CREEK RD

Parcel

Address	12888 MILL CREEK RD
Unit	
Class	R - RESIDENTIAL
Tax Roll	RP_OH
Land Use Code	599 - R - OTHER RESIDENTIAL
Neighborhood	00023000 - G01
Total Acres	15
Taxing District	G01
District Name	DOVER TOWNSHIP
Gross Tax Rate	97.97
Effective Tax Rate	

Owner

Tax Year	2018
Owner	SCHNEIDER JOHN W & DIXIE L

Tax Mailing Name and Address

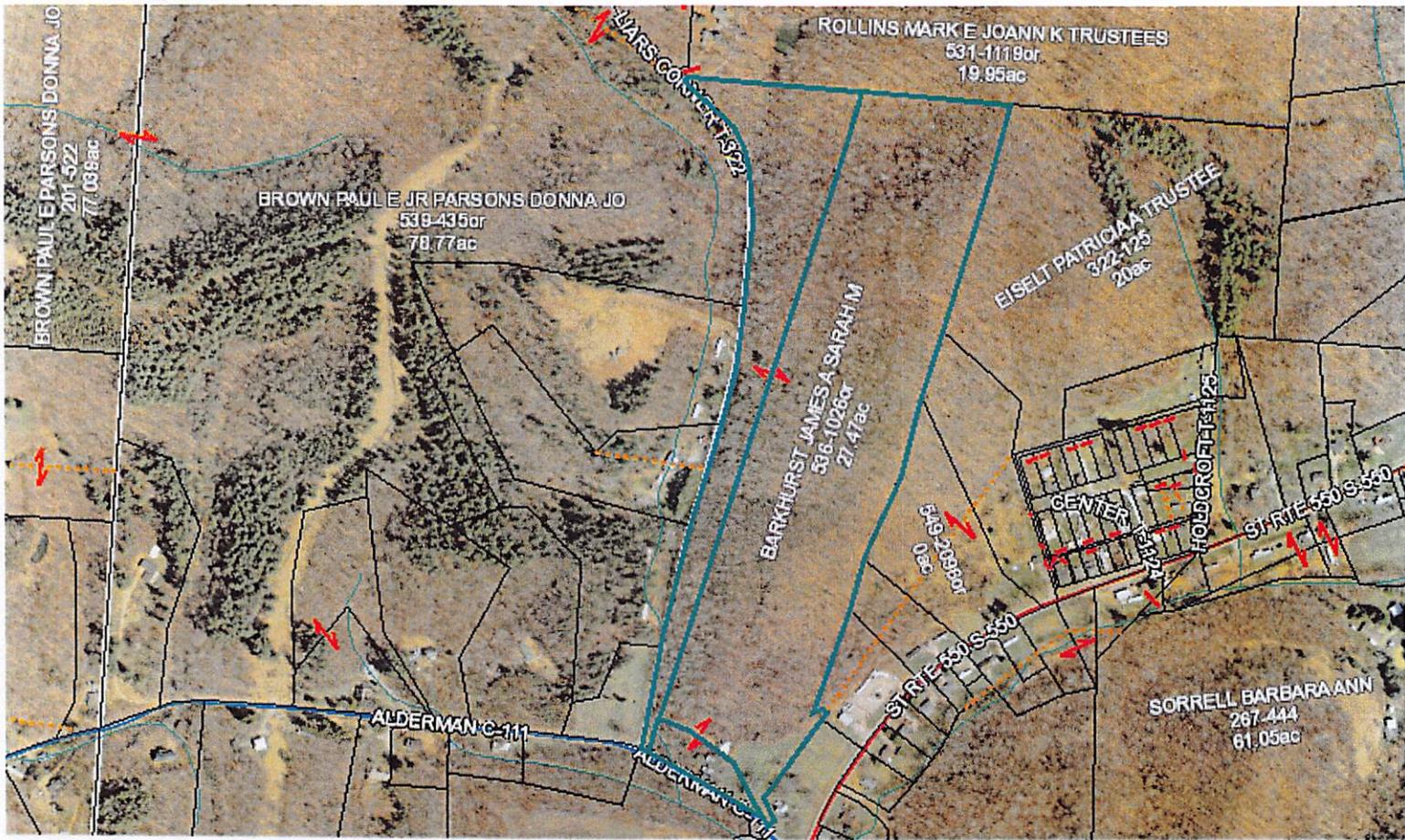
Mailing Name 1	BARKHURST JAMES A
Mailing Name 2	SARAH M
Address 1	12895 MILL CREEK RD
Address 2	
Address 3	MILLFIELD OH 45761
Mortgage Company	
Mortgage Company Name	
Treas Code	

Legal

Legal Desc 1	14-10-00 SEC 7 15.00AC
Legal Desc 2	
Legal Desc 3	
Legal Acres	15

Homestead Credits

Homestead Exemption	YES
Owner Occupancy Reduction	YES



Purchased Sec 7
 Aug 2017

27.47
 12.70
 1.00
 41.17

41.17 37.56
 44.79
 85.96

15.00
 44.76
 59.76

**PARID: G010010002400
BARKHURST JAMES A**

10404 ALDERMAN RD

Parcel

Address	10404 ALDERMAN RD
Unit	
Class	A - AGRICULTURAL
Tax Roll	RP_OH
Land Use Code	101 - A - CASH GRAIN OR GENERAL FARM
Neighborhood	00023000 - G01
Total Acres	1
Taxing District	G01
District Name	DOVER TOWNSHIP
Gross Tax Rate	97.97
Effective Tax Rate	

Owner

Tax Year	2018
Owner	BARKHURST JAMES A SARAH M

Tax Mailing Name and Address

Mailing Name 1	BARKHURST JAMES A
Mailing Name 2	SARAH M
Address 1	12895 MILL CREEK RD
Address 2	
Address 3	MILLFIELD OH 45761
Mortgage Company	
Mortgage Company Name	
Treas Code	

Legal

Legal Desc 1	14-10-00 SEC 7 1.00AC
Legal Desc 2	
Legal Desc 3	
Legal Acres	1

Homestead Credits

Homestead Exemption	NO
Owner Occupancy Reduction	NO

**PARID: G010010002500
BARKHURST JAMES A**

ALDERMAN RD

Parcel

Address	ALDERMAN RD
Unit	
Class	A - AGRICULTURAL
Tax Roll	RP_OH
Land Use Code	199 - A - OTHER AG USE : CAUV QUALIFIED
Neighborhood	00023000 - G01
Total Acres	27.47
Taxing District	G01
District Name	DOVER TOWNSHIP
Gross Tax Rate	97.97
Effective Tax Rate	

Owner

Tax Year	2018
Owner	BARKHURST JAMES A SARAH M

Tax Mailing Name and Address

Mailing Name 1	BARKHURST JAMES A
Mailing Name 2	SARAH M
Address 1	12895 MILL CREEK RD
Address 2	
Address 3	MILLFIELD OH 45761
Mortgage Company	
Mortgage Company Name	
Treas Code	

Legal

Legal Desc 1	SEC 7 27.470 AC
Legal Desc 2	
Legal Desc 3	
Legal Acres	27.47

Homestead Credits

Homestead Exemption	NO
Owner Occupancy Reduction	NO

PARID: G010010002600
BARKHURST JAMES A

LIARS CORNER RD

Parcel

Address	LIARS CORNER RD
Unit	
Class	A - AGRICULTURAL
Tax Roll	RP_OH
Land Use Code	100 - A - AGRICULTURAL VACANT LAND
Neighborhood	00023000 - G01
Total Acres	12.7
Taxing District	G01
District Name	DOVER TOWNSHIP
Gross Tax Rate	97.97
Effective Tax Rate	

Owner

Tax Year	2018
Owner	BARKHURST JAMES A SARAH M

Tax Mailing Name and Address

Mailing Name 1	BARKHURST JAMES A
Mailing Name 2	SARAH M
Address 1	12895 MILL CREEK RD
Address 2	
Address 3	MILLFIELD OH 45761
Mortgage Company	
Mortgage Company Name	
Treas Code	

Legal

Legal Desc 1	14-10-00 SEC 7 12.700A
Legal Desc 2	
Legal Desc 3	
Legal Acres	12.7

Homestead Credits

Homestead Exemption	NO
Owner Occupancy Reduction	NO

Woodland Stand Description and Management Recommendations

General Definitions

Stand: A contiguous group of trees sufficiently uniform in age-class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable and manageable unit.

Diameter: Diameter breast height (DBH) is measured at 4.5 feet above ground.

Seedling – DBH is not measureable.

Sapling – 1” to 4” DBH

Poletimber – 5” to 11.5” DBH

Small Sawtimber – 12” to 16” DBH

Medium Sawtimber – 18” to 22” DBH

Large Sawtimber – 24” DBH and larger

Topography: Refers to the slope of the land.

Aspect: Is the direction that a slope faces.

Stocking Level/Basal Area: An indication of growing-space of the stand. Basal area is the cross-sectional area of all stems of a species or all stems in a stand measured at DBH. Low basal areas are considered to be understocked which can lead to negative impacts on the residual trees in a stand. High basal areas are considered to be overstocked and can lead to negative impacts on the residual trees in a stand.

Silviculture: The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

Invasive Species: Species not native to Ohio and in most cases not native to the United States. Invasive species can inhibit growth and establishment of native hardwoods if they are not controlled.

Timber Stand Improvement (TSI): Improving the quality of a forest stand by removing or deadening undesirable species to achieve desired stocking levels and species composition.

Crown Classes:

Dominate – Crown extends above canopy, direct sunlight to the top and sides of crowns

Co-Dominate – Crown within the main canopy, direct sunlight to the top and limited on sides

Intermediate – Crown in the lower part of main canopy, limited sunlight

Overtopped – Crown entirely under the main canopy, no direct sunlight

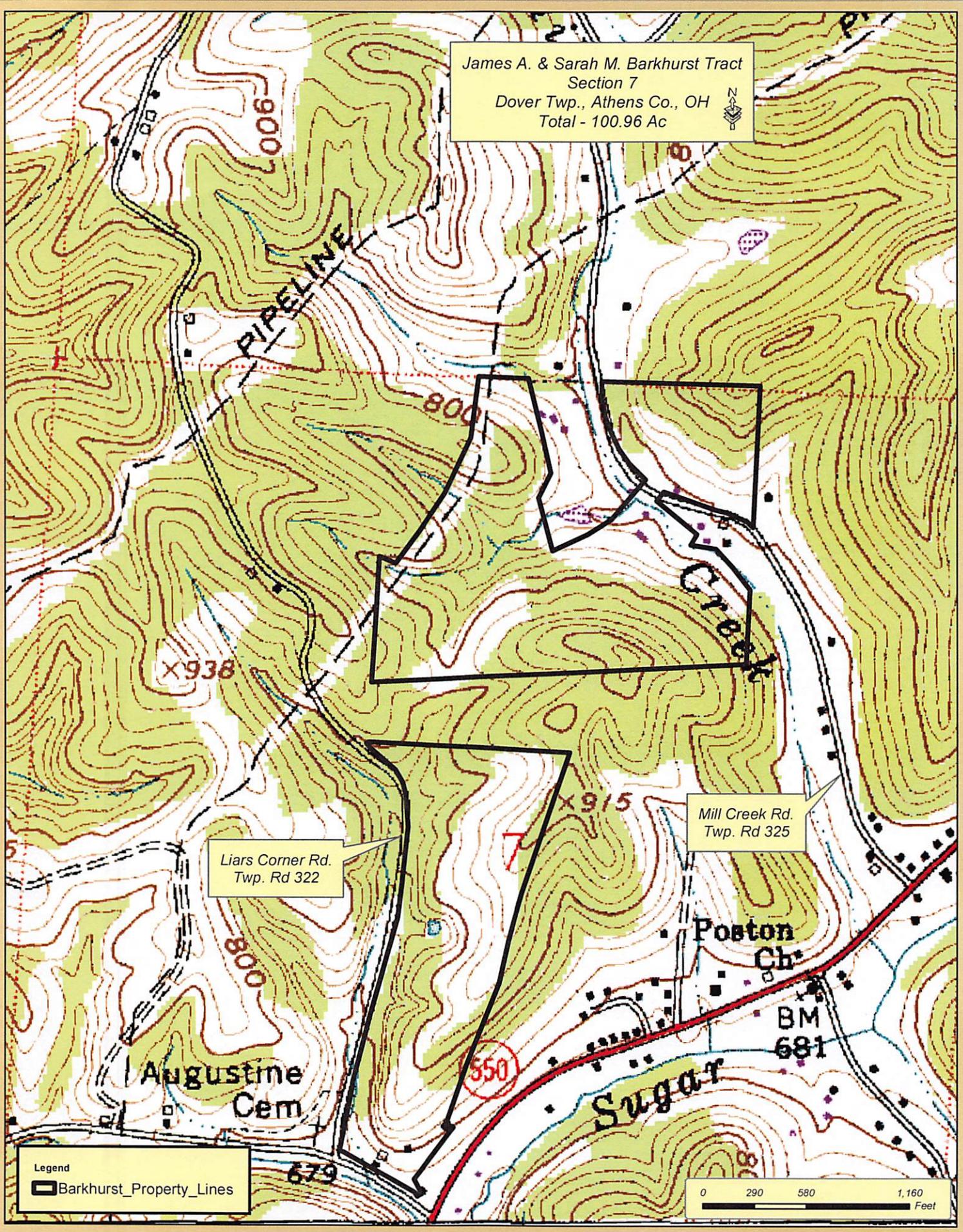
Forestry Terms – Forestry Terminology for Landowners, Professional foresters, and others:

Consistent forestry terminology is essential to anyone interested and involved in the science, management, and conservation of forests.

The Society of American Foresters (SAF) offers a great resource for such forestry terminology: “The Dictionary of Forestry”. This dictionary is an excellent tool available for anyone to learn more about the language used in forestry. The dictionary provides precision, clarity, and consistency in communication of forestry terms.

A list of common forestry terms is included as a handout in this plan.

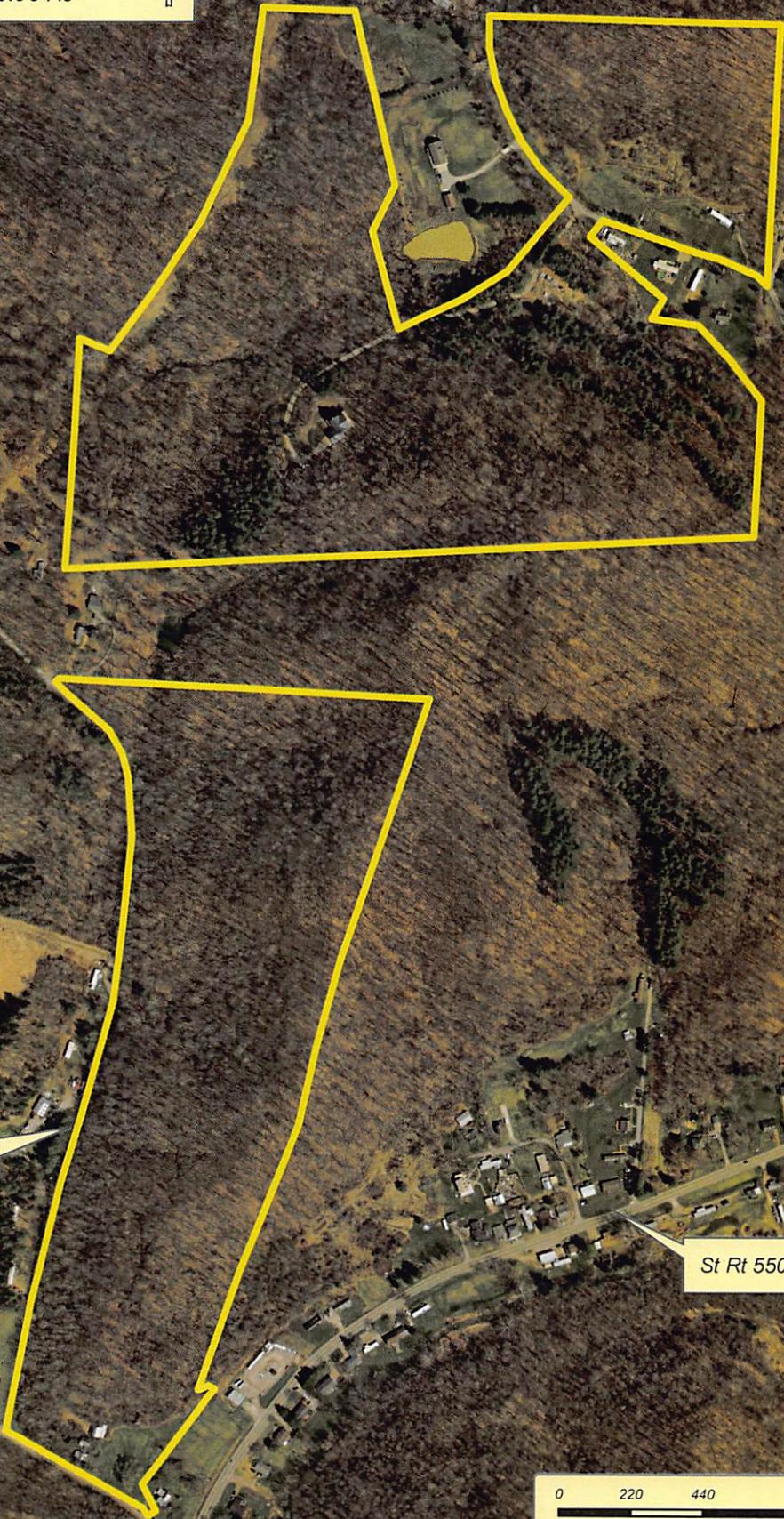
James A. & Sarah M. Barkhurst Tract
Section 7
Dover Twp., Athens Co., OH
Total - 100.96 Ac



Legend
Barkhurst_Property_Lines

0 290 580 1,160 Feet

James A. & Sarah M. Barkhurst Tract
Section 7
Dover Twp., Athens Co., OH
Total - 100.96 Ac

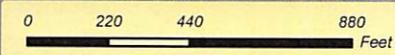


Liars Corner Rd.
Twp. Rd 322

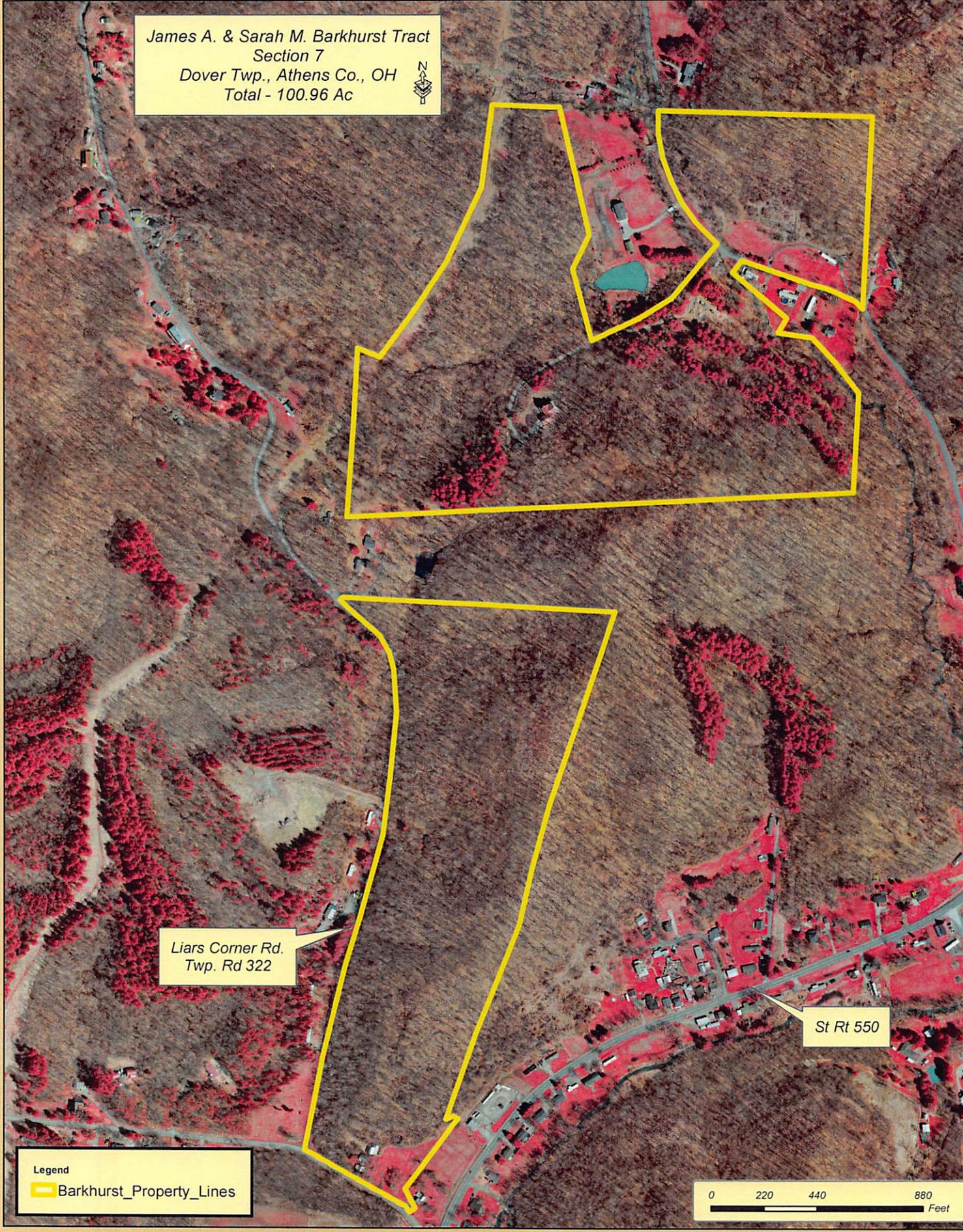
St Rt 550

Legend

 Barkhurst_Property_Lines



James A. & Sarah M. Barkhurst Tract
Section 7
Dover Twp., Athens Co., OH
Total - 100.96 Ac



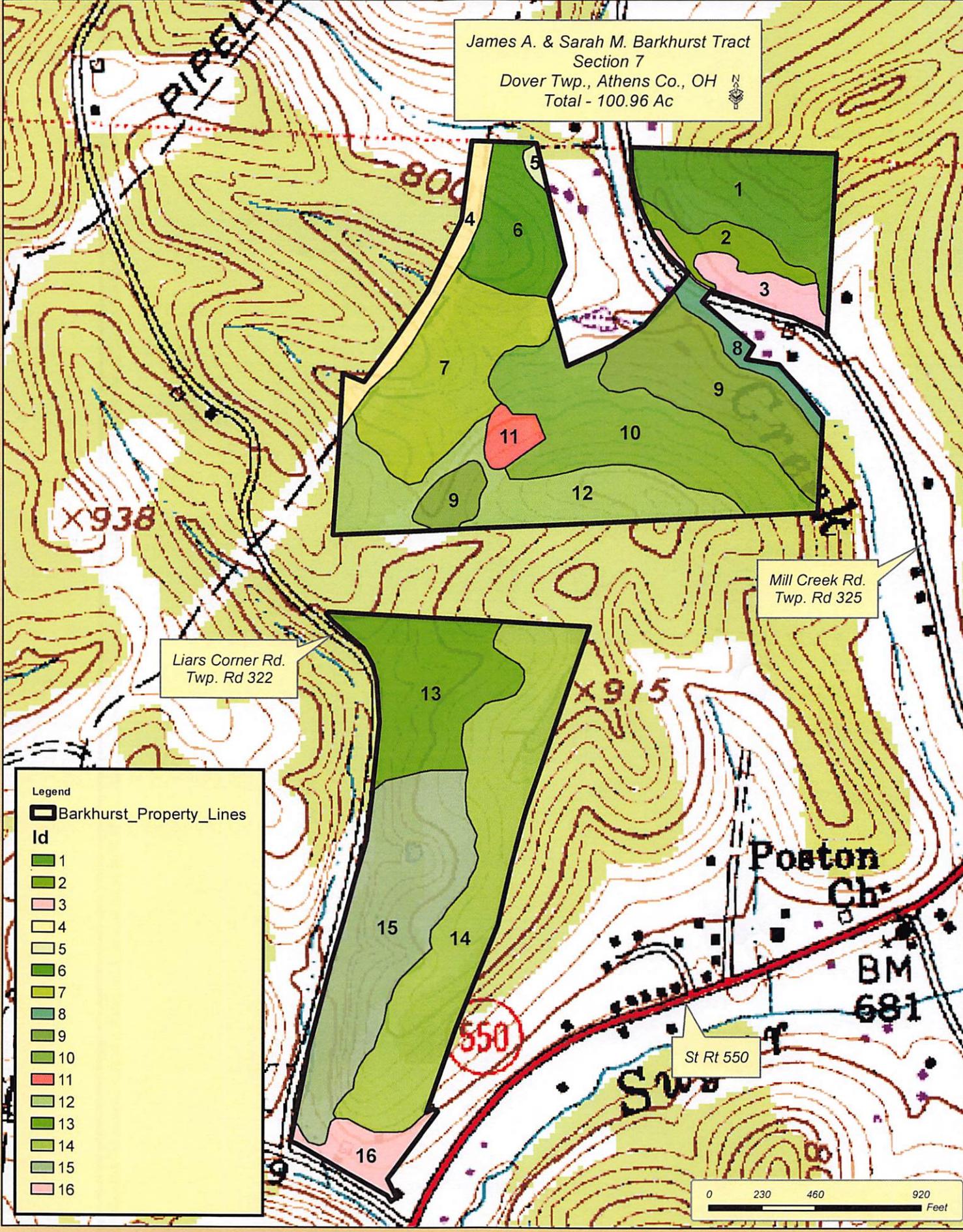
Liars Corner Rd.
Twp. Rd 322

St Rt 550

Legend
Barkhurst_Property_Lines

0 220 440 880
Feet

James A. & Sarah M. Barkhurst Tract
 Section 7
 Dover Twp., Athens Co., OH
 Total - 100.96 Ac



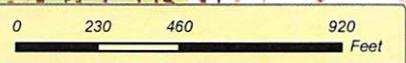
Legend

- Barkhurst_Property_Lines
- Id**
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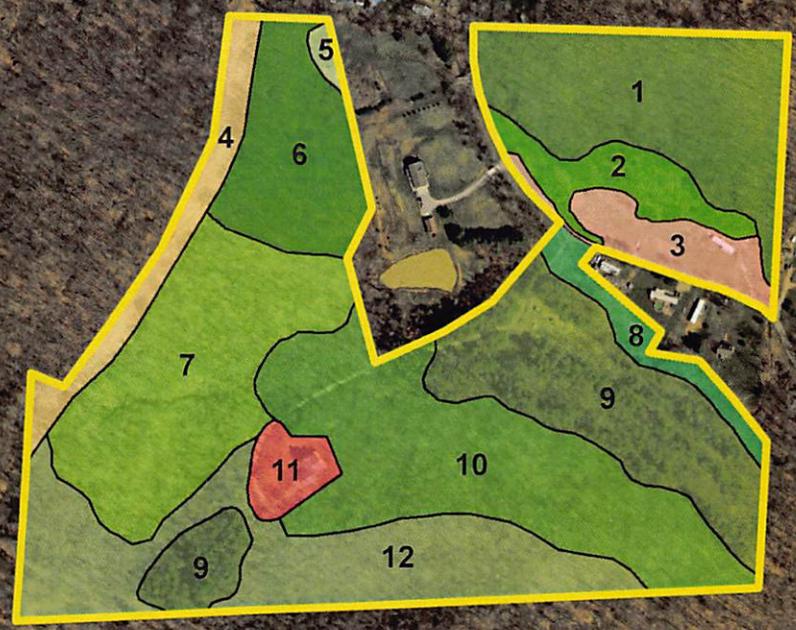
Liars Corner Rd.
 Twp. Rd 322

Mill Creek Rd.
 Twp. Rd 325

St Rt 550



James A. & Sarah M. Barkhurst Tract
 Section 7
 Dover Twp., Athens Co., OH
 Total - 100.96 Ac



Mill Creek Rd.
 Twp. Rd 325

Liars Corner Rd.
 Twp. Rd 322



St Rt 550

Legend

Barkhurst_Property_Lines

Id

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- 16



Woodland Stand Description and Management Recommendations

Stand # 1 - 9.7 acres

Dominant Species: Black Oak, White Oak, Scarlet Oak, Chestnut Oak, Sugar Maple, Hickory spp., Red Maple, Yellow Poplar, Am. Elm, Am. Beech

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Small/Medium sawtimber with scattered large trees

Stocking Level: Fully stocked **and/or Basal Area :** (ft²/acre)

Stand History: No Prior Management

Topography: Gently sloping side slope and benches

Invasive plants or insects impacting this stand: Scattered grapevines found but not at populations affecting the health of this stand. EAB. Autumn Olive along ST 2

Stand Description: This area is a slope area in the northern end of the tract. The entire stand is well stocked with sawlog sized Oak, Maple and Beech trees. Trees are 60+ years old and are growing at an acceptable rate for the site & soil conditions. Understory consists of Am. Beech/Sugar Maple seedlings & saplings because of full crown closure shading the forest floor. This stand contains some of the nicest trees on the ownership.

Past management activities completed in this stand: property lines located and painted

<i>Management Recommendations:</i>
Continue to mark all boundary lines with paint, remark every 5 years or as needed
Work on eradicating the Autumn Olive (edge of #2 but cover entire stand)
Cut scattered grapevines from "crop" trees (not EQIP)

Is a timber harvest recommended? No, not necessary at this time, but a light harvest removing some of the overstory could improve done at some point. If the stand canopy is opened up, non-native invasive will infest this area, so put off as long as possible.

Comments: Some of the Beech trees should be removed, but I cannot recommend it at this time because of the Autumn Olive in adjacent area.

Desired Future Conditions: This stand will produce quality sawlog trees.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 2 - **2.8** acres

Dominant Species: Sassafras, Am. Elm, Tulip Poplar, Red Maple, Dogwood, Red Bud, Hickory spp., numerous dead/dying Ash trees (EAB), Black Locust, some Oak spp., Sugar Maple, Black Walnut, Black Cherry, Sumac

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Sapling/Poletimber with some scattered larger diameter trees

Stocking Level: Fully stocked with desirable tree species

Stand History: Old-Field Reversion

Topography: Gently sloping south facing slope _ ridgetop area

Invasive plants or insects impacting this stand: Ailanthus, Autumn Olive, Emerald Ash Borer (EAB), Japanese Vine Honeysuckle, grapevines (in part of the area)

Stand Description: This area was once cleared and regenerated naturally, which results in the uneven stocking of trees. This stand is in late successional stage of development. Many of the tree species present are "pioneer" trees with limited Oak and Hickory present. This is a lower slope area has a brushy understory with spicebush and invasive species present. Ash trees showing EAB mortality. Thick understory in parts because of open canopy. Good wildlife area.

Past management activities completed in this stand: This property was recently purchased, so no activities have been completed in this area yet. Work is planned. Property lines located (road).

Management Recommendations:

Continue to locate and mark property lines with paint, redo every 5 years or as needed

Work on treating the non-native invasive species in this area. This may include removing most of the understory, saving future "crop" trees and maybe plant additional mass/fruit producing trees & shrubs

Cut any grapevines found from all the future crop trees

Is a timber harvest recommended? No No harvest needed in this area in this 10 yr. Plan

Comments: This area is higher on the priority list to work in because of the number of non-native invasive species present.

Desired Future Conditions: Option -allow area to develop into a mature natural hardwood stand or clear it out and use it as a transitional area between the mature woods and open lands.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Succession is the natural process of reforestation. This transition from grass to weeds to shrubs to trees may happen in one decade or it may take as long as a century to complete. Often, forests are cleared and farmed until it is no longer profitable to do so. This causes fields to be abandoned and lie fallow for many years.

During early succession the weeds are the first plants to appear in an abandoned field. Asters, goldenrod, honeysuckle, thistle, ragweed and blackberry are common weeds to quickly invade an abandoned field.

During middle succession the next wave of invaders to gain a foothold are the shrubs and small trees. Some common shrubs and small trees found on transition sites are multi-flora rose, sumac, poison ivy, highbush blueberry, dogwood, crabapple, persimmon and sassafras.

During late succession, if the seed source is close by, black locust, Virginia pine, black cherry, red maple, and tulip poplar soon become established. After five to ten years these intolerant and moderately tolerant trees will have overtopped and eliminated the shrubby plants. These intolerant trees usually reach maximum development at 60 to 75 years of age. Following this, at a slower pace, the intermediate tolerant oaks and tolerant sugar maple begin to occupy the understory. As the forest ages, the intolerants die and the tolerates take over the growing space vacated by the intolerants.

Woodland Stand Description and Management Recommendations

Stand #3 - 2.5 acres Non-Forest Stewardship Area _residential area & mowed field

Dominant Species: NA

Forest Type or Dominant Vegetation: NA

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: N/A

Topography: Gently sloping

Invasive plants or insects impacting this stand: Autumn Olive & Privet along field edges are the biggest issue, Multi Flora Rose and Japanese Vine Honeysuckle in some areas.

Stand Description: This area covers the residential area (1ac) and the mowed field area on the north side of Mill Creek Road. All non-native invasive species and habitat improvement work located along the edges of this field is addressed in the adjacent stand descriptions.

Past management activities completed in this stand Property lines located & painted yellow, area mowed to improve aesthetics and habitat diversity for wildlife benefit.

<i>Management Recommendations:</i>
Eradicate any non-native invasive species found along edges as time permits.
If not mowed at least semi-annually, plant to trees

Is a timber harvest recommended? N/A

Comments: Current plans are for keeping this area as a mowed grassy field area. If this area, or parts of this area, are determined to be difficult to maintain, they should be planted to trees at that time. Contact your local Service Forester or Athens County SWCD office for planting recommendations.

Desired Future Conditions: Non- Forest Use – Residential area and large yard space

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Woodland Stand Description and Management Recommendations

Stand # 4 - 2.3 acres Non-Forested Area – gas line right-of-way

Dominant Species: grasses, broadleaf plants, shrubs & a variety of hardwood seedlings, Bush Honeysuckle & Autumn Olive

Forest Type or Dominant Vegetation: NA

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: Other, gas transmission line

Topography: Rolling

Invasive plants or insects impacting this stand: Bush Honeysuckle & Autumn Olive scattered along edges (addressed in adjacent stand recommendations)

Stand Description: This stand covers the large gas transmission line easement that bisects the NE corner of this ownership. This stand represents a steep hillside part of the gas easement.

Past management activities completed in this stand: none noted other than property line located and painted with yellow paint. This area mowed annually.

<i>Management Recommendations:</i>
Work on eradicating the Amur & Autumn Olive along the edges of the easements
Mark property lines with paint, redo every 5 years or as necessary to remain easily visible.

Comments: fairly steep slopes with some rutting evident

Desired Future Conditions: N/A

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Woodland Stand Description and Management Recommendations

Stand #5 - .2 acres Non-Forest Stewardship Area – Mowed field area

Dominant Species: NA

Forest Type or Dominant Vegetation: NA

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: N/A

Topography: Gently sloping

Invasive plants or insects impacting this stand: Autumn Olive & Amur along field edge is the biggest issue, Multi Flora Rose in some areas.

Stand Description: This area covers the small field near the residential area (in-laws house) All non-native invasive species and habitat improvement work located along this field is addressed in the adjacent stand descriptions.

Past management activities completed in this stand Property lines located, area mowed

<i>Management Recommendations:</i>
Eradicate any non-native invasive species found along edges as time permits.
Keep area mowed

Is a timber harvest recommended? N/A

Comments: Current plans are for keeping this area mowed. If this area, or parts of this area, are ever taken out of agricultural use, they should be planted to trees at that time. Contact your local Service Forester or Athens County SWCD office for planting recommendations.

Desired Future Conditions: Non- Forest Use – yard area

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Woodland Stand Description and Management Recommendations

Stand # 6 - 4.5 acres

Dominant Species: Hickory spp., Yellow Buckeye, Hawthorn, Big Toothed Aspen, Am. Elm, Red Maple, Black Locust, Sassafras, Black Oak, White Oak, Scarlet Oak, Sugar Maple, Spice Bush and dead Ash

Forest Type or Dominant Vegetation: Oak-Hickory

Stand Diameter or Size Class: Poletimber/Small sawtimber

Stocking Level: Fully stocked in most areas

Stand History: No Prior Management

Topography: Draws/Ravines, ridge & slopes between 2 hollows

Invasive plants or insects impacting this stand: Bush Honeysuckle, Privet, Autumn Olive, Multi-Flora Rose, EAB, a few grapevines

Stand Description: This stand covers the dry soil, side slope and sloping ridge on the eastside of the gas line, above the Harold's house site. This area appears to have been pastured at some point and then left to recover on its own. Areas of thick understory, other areas have limited crown closure and is semi-open. EAB did a number on the Ash stocking, so canopy gaps are becoming infested with invasive shrubs. Nice pole sized Black Oaks in the lower part of area.

Past management activities completed in this stand: Property lines located and painted with yellow paint.

Management Recommendations:

Continue to mark all boundary lines with paint, remark every 5 years or as needed

Work on the eradication of the invasive species in this stand as time permits. Then cover area treating the few remaining scattered vines.

Is a timber harvest recommended? No not necessary in this 10yr Plan

Comments: This is a low productivity area and not high on the activity schedule. This area needs little attention other than working on the invasive species. This area is a great wildlife area. The scattered larger trees found within this stand could be left for mass production and nesting / roosting sites.

Desired Future Conditions: This stand will produce sawlog trees over time, as the trees mature.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 7 - 8.4 acres

Dominant Species: Yellow Poplar, Black Walnut, Black Oak, White Oak, Hickory spp., Yellow Buckeye, Big Toothed Aspen, Am. Elm, Red Maple, Sassafras, Red Oak, Sugar Maple, Sycamore, Spice Bush and dead Ash

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Small/Medium sawtimber

Stocking Level: Fully stocked

Stand History: No Prior Management

Topography: Draws/Ravines, ridge & slopes between 2 hollows

Invasive plants or insects impacting this stand: Autumn Olive, Bush Honeysuckle, Privet, Burning Bush, Barberry, Multi-Flora Rose, EAB

Stand Description: This stand covers side slopes and sloping ridge, near the gas line easement area, along the western property line. Again, this area appears to have been pastured at some point. Grapevines are an issue in portions of this area. Areas of thick understory, other areas have crown closure and has a fairly open understory. EAB has killed the Ash, so canopy gaps are becoming infested with a variety of native and invasive shrubs. Nice sawlog sized Black Walnuts in the lower stream areas. Trails in this area are maintained, but steep sections could pose an erosion issue at some point. The 2 intermittent stream are located in this area.

Past management activities completed in this stand: Property lines located and painted with yellow paint, trails established.

Management Recommendations:

Continue to mark all boundary lines with paint, remark every 5 years or as needed to remain easily visible.

Cut the grapevines from all the "crop" trees in this area. As time permits work on reducing the number of invasive species in this stand.

Is a timber harvest recommended? No not necessary in this 10yr Plan

Comments: Amur, Privet & Autumn Olive are an issue in this area. Treating them is in the activity recommendations. Cutting grapevines is the priority work in this area. This area will require work to reduce the number of invasive species.

Desired Future Conditions: This stand will produce sawlog trees over time, as the trees mature.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 8 - 1.5 acres wooded riparian area, driveway entrance & road frontage

Dominant Species: Sugar Maple, Red Maple, American Sycamore, American Elm, Black Walnut, Yellow Buckeye, Box Elder, Hickory spp.

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: All size classes

Stocking Level: Fully stocked, along the creek banks

Stand History: No Prior Management

Topography: Gently sloping wooded side slope leading to stream bottom.

Invasive plants or insects impacting this stand: A few scattered grapevines and non-native invasive woody shrubs (Autumn Olive, Bush Honeysuckle, Privet)

Stand Description: This area has been separated of the adjacent wooded hillside to address the importance of protecting Stream Side Management Zones (SMZ). The perennial stream, Mill Creek, that is adjacent to the Co. Road that bisects this ownership. This area has full canopy cover and is wide enough to provide full shading of the stream channel. The steep, wooded hillside is rich with a variety of understory plants. The stream area is subject to frequent flooding. The driveway entrance has a bridge/culvert over the stream.

Past management activities completed in this stand: Property lines located and painted with yellow paint.

<i>Management Recommendations:</i>
Continue to mark all boundary lines with paint, remark every 5 years or as needed to remain easily visible.
Cut scattered grapevines from "crop" trees
Cut & treat any non-native invasive species identified in these areas as time permits
Note: care needs to be taken on herbicide use around aquatic areas

Is a timber harvest recommended? No, not necessary at this time.

Comments: Because of being a SMZ area along a significant perennial stream, most portions of this stand will be managed as "limited activity area" to retain the present-day stand integrity and preserve canopy shading effects.

Desired Future Conditions: Maintain this area as a mixed species hardwood area.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Streamside Management Zone (SMZ) is a forested strip or area next to a creek or stream that is managed with specific attention to instream and downstream water protection. SMZ's should be maintained around both intermittent and perennial streams, lakes, ponds, naturally flowing springs, and reservoirs. Forest management activities within an SMZ should leave the forest floor essentially undisturbed with minimum soil exposure. Mechanical site preparation, logging decks, skid trails, and firelanes are restricted within an SMZ. Similarly, roads should not be constructed within an SMZ, except at designated crossings (see Stream Crossing Alternatives below). Roads should cross the stream at a right angle. Drainage structures such as wing ditches, water bars, and cross drain culverts should vent their runoff before they enter the SMZ.

Functioning as buffer strips, SMZ's are very effective in filtering sediment (soil particles) from surface runoff. The water in the runoff can and should reach the stream, but the vegetation in the SMZ filters sediment and other suspended solids resulting from the forest management activity. This filtering process may also lessen any negative effects that pesticides may have on water quality. The trees immediately adjacent to the water provide woody debris to benefit aquatic organisms. The trees also provide shade to the stream, preventing any unnatural changes in water temperature. Direct sunlight can drastically raise water temperatures, which may lower the oxygen content of the water and make it difficult for fish and other aquatic organisms to survive.

Woodland Stand Description and Management Recommendations

Stand # 9 - 8.3 acres

Dominant Species: White Pine_with native hardwood trees invading in openings- Yellow Poplar, Black Cherry Red Maple & Sugar Maple

Forest Type or Dominant Vegetation: Softwood Plantation

Stand Diameter or Size Class: Poletimber/Small sawtimber

Stocking Level: Over stocked **and/or Basal Area:** (ft²/acre) average

Stand History: No Prior Management

Topography: Gently sloping

Invasive plants or insects impacting this stand: light grapevines, a variety of invasive shrubs, vines and grasses in understory and along open edges, White Pine Adelgid

Present conditions or resource concerns to consider: This White Pine stand appears to have been established on an 8' X 8' spacing. Trees are approximately 50 years old. Because of the dense stocking trees are smaller in diameter but 60+ feet tall. Growth rates on the dominate trees is slowing. The trees are fairly uniform in size, (10 -14" dbh) with an occasional larger sawlog tree present with the smaller trees Thick understory of briars and brush in some portions of this stand, other parts are open. This area has scattered grapevines that should be cut from crop trees – entire stand should be covered. Wind throw damage in pocket near the road.

Past management activities completed in this stand: none noted

<i>Management Recommendations:</i>
Continue to locate and mark property lines with paint – redo every 5 years
Work on eradication of any non-native invasive plant found in this area
Possible harvest of this area.

Is a timber harvest recommended? Yes This stand should have been thinned 20 years ago. Because of the height of these trees and the ratio of live crown to total tree height is less than 1/3, I do not recommend trying to thin these stands. If a harvest is planned, it should be a complete removal of the pines to allow the established hardwood regeneration to flourish.

Comments: These areas are a cut it all or leave it alone areas. No matter what, Autumn Olive, Bush Honeysuckle, Privet and other non-native species will infest these areas. The pine trees do provide some habitat diversity for this farm, and if left alone will slowly over time become a hardwood stand as the pines continue to die out.

Desired Future Conditions: Maintain as a mixed Pine and hardwood stand area.

Desired Forest Type or Dominant Vegetation: As Listed in Dominant Species

Desired Stand Structure: Even Aged

Woodland Stand Description and Management Recommendations

Stand # 10 - 10.4 acres

Dominant Species: Yellow Poplar, Red Maple, Am. Elm, Ash (dead), Black Locust, Black Oak, White Oak, Chestnut Oak, Sassafras, Hickory spp., Black Walnut, Sycamore, Sugar Maple, Black Cherry, Hackberry, Paw Paw, Spice Bush

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Poletimber/Small sawtimberscattered medium diameter logtrees

Stocking Level: Fully stocked, but stocking rates vary, depending on location in stand

Stand History: Harvesting - "Select cut" by a previous owner that remove mainly Oaks

Topography: Gently sloping overall, some steep slope sections & flat benches

Invasive plants or insects impacting this stand: Bush Honeysuckle, Autumn Olive, Privet, Multi-Flora Rose, EAB damage evident, Grapevines, Japanese Vine Honeysuckle

Present conditions or resource concerns to consider: This is the mid-slope area, above the White Pine stand. Larger diameter sawlog trees scattered through out this stand, mainly Yellow Poplar trees. Scattered smaller diameter sawlog Oak tree species present and will develop into quality sawlog trees. Trails constructed along the benches in this area. Fairly brushy understory because of the thin canopy and limited shading of the forest floor. This moist soil site is beneficial for the Sugar Maple and Yellow Poplar tree growth.

Past management activities completed in this stand: Property line located and painted yellow, some grapevines cut, trails developed.

<i>Management Recommendations:</i>
Continue to mark all boundary lines with paint, remark every 5 years or as needed
Work on the eradication of the grapevines from the crop trees in this area as time permits
Work on the eradication of the non-native invasive species as time permits.
Maintain trails though this area.

Is a timber harvest recommended? No not necessary in this 10yr Plan

Comments: This area is good area to cut the grapevines from the "crop" trees. Leave a few arbors for wildlife benefit in undesirable trees.

Desired Future Conditions: Allow area to naturally develop into a hardwood stand.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 11 - **1.0** acres Non-Forested Area_ Residential Area

Dominant Species: NA

Forest Type or Dominant Vegetation: N/A

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: N/A

Topography: Gently sloping

Invasive plants or insects impacting this stand: numerous non-native invasive species along edges (addressed in adjacent stand descriptions)

Stand Description: This stand covers the residential area. The residential structure, associated storage area, yard space and driveway are included in this stand. The residential area is semi-wooded with a variety of trees & shrubs.

Past management activities completed in this stand: Yard area mowed.

<i>Management Recommendations:</i>
Annually inspect for invasive species & eradicate any found

Is a timber harvest recommended? N/A

Comments: The edges of this area will be a persistent “problem area” for the landowner, in regard to non-native invasive plants to become established in. James & Sarah constructed the home on this site.

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Woodland Stand Description and Management Recommendations

Stand # 12 - **8.2** acres

Dominant Species: Yellow Poplar, Red Maple, Yellow Buckeye, Box Elder, Ash (dead), Black Locust, Hickory spp., Black Walnut, Sycamore, Hackberry, Big Toothed Aspen, Sugar Maple, Black Cherry

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Sapling/Poletimber scattered small diameter sawlog trees

Stocking Level: Under stocked with desirable species, but stocking rates vary, depending on location in stand

Stand History: Old-Field Reversion

Topography: Gently sloping

Invasive plants or insects impacting this stand: Autumn Olive, Bush Honeysuckle, Privet, Multi-Flora Rose, Japanese Honeysuckle, Oriental Bittersweet, Burning Bush, EAB, Grapevines

Present conditions or resource concerns to consider: This area was once open pasture and has naturally began the process of regenerating into forestland_ middle successional stage. Understory is composed of a mixture of invasive species of shrubs, Multi Flora Rose, vines and briars. Limited amount of advanced Oaks & Sugar Maple reproduction in this area. Scattered pole trees present. This area is almost beyond controlling the non-native invasive species in the understory. Trails allow passage through this area.

Past management activities completed in this stand: Property line located and painted with yellow paint; trails maintained thru this area

Management Recommendations:

Continue to locate & mark all boundary lines with paint, remark every 5 years or as needed

Cut grapevines from Oaks & Maples in this area and as time permits begin work on eradicating the non-native invasive vines & shrubs in this area,

Is a timber harvest recommended? No not necessary in this 10yr Plan

Comments: Non-native invasive species are the real issues in this area. Again, this area is a great wildlife area, adjacent to more mature wooded stands. The scattered larger trees found within this stand will be good for mass production and nesting / roosting sites (Poplars and a few Oaks).

Desired Future Conditions: Allow area to naturally develop into a hardwood stand.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 13 - **8.8** acres

Dominant Species: Black Oak, White Oak, Chestnut Oak, Sugar Maple, Hickory spp., American Beech, Sassafras, Red Maple, Yellow Poplar, Ash (dead)

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Poletimber/Small sawtimber with larger trees scattered on slopes & in ravines

Stocking Level: Fully stocked

Stand History: No Prior Management

Topography: Gently sloping hollow areas and side slope

Invasive plants or insects impacting this stand: EAB, Amur, Autumn Olive, grapevines (a few scattered vines)

Stand Description: This area is a mosaic of small patches of solid trees, areas of all poles and brush, with scattered small sawlog trees that was separated out of adjacent Stand 15 because it is a moist soil site and the scattered larger trees present. Portions of the area has adequate stocking of trees that are providing crown closure. Quality small sawlog Oaks and more Poplar in the stand composition that in adjacent areas. This area has some wet weather springs and vernal pools.

Past management activities completed in this stand: Property lines located and painted with yellow paint.

<i>Management Recommendations:</i>
Continue to locate & mark property lines with paint, redo every 5 years or as needed
Continue to cut the scattered grapevines from potential crop trees in this area
Inspections for non-native invasive species –treat identified infestation areas as time permits

If a timber harvest is recommended: No not in this 10-year management cycle.

Comments: This stand is a lower slope area with good productivity soils. Area was pastured in the past.

Desired Future Conditions: Maintain this area as an uneven aged hardwood stand. Promote the Oak development for timber and hard mass potential.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 14 - **16.5** acres

Dominant Species: Sassafras, Big Toothed Aspen, Dogwood, Red Bud, Red Maple, Black Cherry, Hickory spp., Am. Beech with the southern portion of this area having additional stocking of Black Oak, Chestnut Oak, White Oak and Sugar Maple

Forest Type or Dominant Vegetation: Oak-Hickory

Stand Diameter or Size Class: Poletimber with larger trees scattered in portions of stand

Stocking Level: Fully stocked for soils & site but not all areas with desirable species.

Stand History: No Prior Management, again an area that was “open” in the past

Topography: Gently sloping ridgetop, upper slope area

Invasive plants or insects impacting this stand: southern end

Stand Description: This area is in the middle successional stage of development with mainly “pioneer” species present in most of the area. Again, this area was pastured in the past. Portions of the area has adequate stocking of trees that are providing some crown closure, reducing the briars in the understory. Dry site area – with slow tree development. This is not a productive timber site but does provide some hard mass food area for wildlife. The northern ½ of this stand is mainly pole trees of undesirable species. Some oaks in the understory.

Past management activities completed in this stand: trails maintained; property lines located and painted with yellow paint.

Management Recommendations:

Continue to locate & mark property lines with paint, redo every 5 years or as needed

Possible TSI work in this area -patch clearcuts to promote oak regeneration 2-3 acre patches at a time every 3 years or so

Inspections for non-native invasive species – reduce Amur/Autumn Olive as time permits

If a timber harvest is recommended: No, not a commercial harvest in this 10-year management cycle.

Comments: This stand is an upper slope area, with low productivity soils. A south facing slope area. Area was pastured in the past. The patch clearcuts will benefit wildlife and release seedling oaks in the understory.

Desired Future Conditions: Maintain this area as an uneven aged hardwood stand. Promote the Oak development for timber and hard mass potential.

Desired Forest Type or Dominant Vegetation: Oak-Hickory

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 15 - **13.2** acres

Dominant Species; Chestnut Oak, Scarlet Oak, Black Oak, White Oak, Hickory, Sugar Maple, Red Maple, Am. Beech, Black Cherry, Yellow Poplar, Yellow Buckeye, Paw Paw

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Poletimber/Small sawtimber with scattered larger trees

Stocking Level: Fully stocked

Stand History: No Prior Management

Topography: Gently sloping with sections of steep slopes and flat benches

Invasive plants or insects impacting this stand: a few scattered grapevines, Japanese Knotweed along the stream drainage and Twp. Rd (near Augustine Cemetery) Autumn Olive & Amur along edge of Stand 16 area.

Stand Description: Small diameter sawtimber stand with a fairly open understory in most spots. All sizes of trees in the stand composition, but pole/small sawtimber sized tree classes are the most dominate. Understory sapling trees are Sugar & Red Maple, Buckeye, Paw Paw and Beech. This stand includes a west facing side slope and a small hollow. Natural spring area, so riparian zone should be buffered for water quality protection. Lower part of this stand is a good moist site with high soil quality indicator plants present near the road. Steep slopes and benches comprise the topography in this area.

Past management activities completed in this stand: Property lines located and painted with yellow paint; trail established through the area.

Management Recommendations:

Annual inspection of area for non –native invasive species – work on eradicating any found.

Maintain property lines. Re-paint every 5 years or as necessary to remain easily visible.

TSI work removing Red Maple, Buckeye and defective trees from stand composition

Is a timber harvest recommended? No No harvest is needed in this area in this Plan period.

Comments: is a higher priority area for timber stand improvement work at this time. The identified areas with non-native invasive species present should be addressed.

Desired Future Conditions: Allow area to naturally develop into a mature hardwood stand.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand #16 - 2.66 acres Non-Forest Stewardship Area _Residential area & mowed field

Dominant Species: NA

Forest Type or Dominant Vegetation: NA

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: N/A

Topography: Gently sloping

Invasive plants or insects impacting this stand: Autumn Olive & Bush Honeysuckle along field edges are the biggest issue, Japanese Knotweed in stream bank area.

Stand Description: This area covers the residential area (1ac) and the mowed field area in the SE end of this tract. All non-native invasive species work located along the edges of this field is addressed in the adjacent stand descriptions.

Past management activities completed in this stand: Property lines located and painted, area mowed to improve aesthetics and habitat diversity for wildlife benefit. House being refurbished.

<i>Management Recommendations:</i>
Eradicate any non-native invasive species found along edges as time permits.
If not mowed at least semi-annually, plant to trees

Is a timber harvest recommended? N/A

Comments: The house is being renovated and will be used as a rental. This house was formally "The Elms" bar for many years, prior to being vacated.

Desired Future Conditions: Non- Forest Use – Residential area and large yard space

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Recommended Management Activity Schedule

Year(s) Suggested	Mgmt. Unit	Required Task?	EQIP Practice?	Acres	Recommendations
2019, 2024, 2029	All Farm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA	Inspect & remark any portions of property lines with paint and signs necessary to help prevent illegal trespass. This task must be completed before this farm is eligible for enrolment into either OFTL or CAUV forestry property tax reduction programs.
2020 -2029	14	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9-10 ac	Possible small clearcuts for Oak regeneration and habitat development. Three 2-3 ac cuts spaced several years apart
2019-2022	1 7,10,12 & 13	<input type="checkbox"/>	<input type="checkbox"/>	45	Cut grapevines from all crop trees -cover entire stands. Leave a few arbors for wildlife food source in "junk" trees - not EQIP – too few vines per ac
2020-2024	2	<input type="checkbox"/>	<input type="checkbox"/>	2	Mow or mechanically cut and then treat the non-native invasive species in that area
2019 -2029	Entire Farm	<input type="checkbox"/>	<input type="checkbox"/>	NA	Maintain road & trails into the wooded acres of the property for access. Construct new trails in Stand 1-3 area.
2019 -2029	7,10,12,14 & 15	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25+ ac	Treat non-native invasive shrubs around_ forest stand edges, trail edges and fields first. This will be ongoing work for the Owners to complete over numerous years, as time allows, entire stands need covered treating the scattered isolated shrubs as well as the obvious patches.
2019-2029	15	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13 ac TSI work 1 ac Knotweed	TSI work removing Red Maple, Buckeye & damaged trees from stand to reduce overstocking and release Oak "crop" trees. Treat Japanese Knotweed along west edge of stand
2021 -2029	9	<input type="checkbox"/>	<input type="checkbox"/>	8 ac total	Possible harvest of the White Pine trees to convert area over to hardwood stands. WPA is in the stands causing mortality.
2024 & 2029	Whole Property	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Next Site Visit – Woodland reviews are recommended at least once every five years, and no more than ten years, based upon the date of the last actual woodland evaluation conducted by your forester	

Before entering a timber sale agreement, or conducting other forestry work that is not listed in your activity schedule, contact your forester first to ensure compliance with your approved woodland stewardship management plan

James A. & Sarah M. Barkhurst Tract
 Section 7
 Dover Twp., Athens Co., OH
 Total - 100.96 Ac
 Activity Map

Stands 1,7,10,12,13
 Cover entire stands cutting
 grapevines from "crop" trees.
 Leave a few arbors for wildlife.

Stands 7,10,12,14,15
 These stands have the heaviest
 concentration of invasive plants
 and vines. As time permits work
 on reducing populations, cut & treat
 fruit bearing plants first to reduce future
 seed dispersion. Cover entire areas.

St 2 Site clearing
 invasive control

St 9 Possible Pine
 Harvest Area

ST 15 TSI Area
 Small 2-3 ac clearcuts to promote
 Oak regeneration. 3 harvests
 to stagger habitat cover

St 15 TSI work - entire stand
 Cut Red Maples, Buckeye, Elm &
 undesirable species to release Oaks

Japanese
 Knotweed

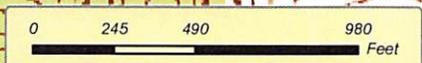
Autumn Olive, Privet &
 Bush Honeysuckle

Legend

Barkhurst_Property_Lines

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Woodland Resource Descriptions

General Soils Information – a general description of the soil type(s) and the general productive capacity of the soil:

Soil Type(s): BkF, BrD, BrE, Chg1AF, FcA, StD, StF, VbD, VbE, WhD, WmE

Soil Drainage Class: Moderately well drained to well drained

General Description: See Soils maps and descriptions in Addendum for detailed descriptions. Also included in the Addendum is a map and associated chart showing the Forest Productivity (Tree Site Index) of the tract.

An on-line resource that can be used to obtain detailed soils information is:

<http://websoilsurvey.nrcs.usda.gov/app/>

Site Class: (using Woodland Productivity): Good to Excellent Northern Red Oak

Timber Information - a general description of the timber characteristics of quality and potential:

Future timber production potential is good for parts of this property because of the fact they are young stands and just maturing into sawlog trees (Stands 1,7,13 & 15). Scattered large sawlog trees are found throughout areas of this ownership, mainly on the steeper slopes and along the drainages. The northern end of this ownership has some of the largest Oaks on this Ownership. The center farm has maturing Pines but most of the hardwood areas have been pastured and harvested. The remaining southern part of this farm is a wooded hillside that is fairly young, is recovering well from past pasturing and will need CTR work to reduce over stocking and small patch clearcuts to promote Oak regeneration and improve wildlife habitat. Overall these slopes are well developed, and the majority of these areas are fully stocked with desirable commercial tree species.

Timber stand improvement (TSI) management practices, such as, grapevine control, working on the elimination of non-native invasive species of woody shrubs & trees and then crop tree release work will certainly enhance the quality and value of your timber resources. These important tasks will allow you to maximize the timber potential in your woods. Note -before creating new opening in the forest canopy, the non-native invasive species need to be addressed first, if possible.

Wildlife – a general description of the wildlife habitat quality and potential:

Your forestland provides valuable habitat for wildlife, including mammals, birds, and amphibians. Many of the tree species are used by this wildlife for food, cover and nesting sites. Some of the more valuable wildlife food trees species include oaks, beech, cherry, dogwood and hickory. Many other tree species are critically important to certain species of wildlife.

Grapevines also are an important food and cover for birds and can be left in low quality and cull trees. Cover, food and water are all necessary to attract wildlife. Different species use different cover types and maintaining a diversity of cover is key to attracting a wide variety of wildlife. Maintaining some of the conifer stand mixed in with the native hardwood trees provides habitat diversity (ST 9). A mixture of sapling areas, pole areas and sawtimber areas will help meet the need for habitat diversity. Small openings in the forest and/or open areas along woodland roads help provide areas for birds and their young to come and catch insects. Openings can also be seeded to grass and clover mixes to provide an additional variety of food. Your trail system provides travel corridors and are an enhancement to this farm.

Please note all habitats don't necessarily have to be present on your property...your neighbor's land may offer a habitat type different than what is available at your forest. You can

extend habitat benefits using complimentary cover types beyond your boundaries...the wildlife doesn't mind.

The diversified size class of trees & shrubs of the forested land on this tract provides suitable habitat for a variety of game and non-game species of birds and animals. Openings, such as the mowed areas, Gas line easement and access trails that are grass covered, are providing the additional feeding & nesting sites. Areas of thick understory benefit both game & non-game species of mammals and birds. The intermittent stream area, Stand 8, is an important ecological asset for a variety of amphibian species, reptiles and insects.

Threatened & Endangered Species – considerations for threatened and endangered species, including the direct relationship with biological diversity:

Threatened and endangered species have certain habitat requirements. Habitat requirements for threatened or endangered species may or may not be found on this forest land

The Division of Wildlife (DOW) participates in an inter-disciplinary Environmental Review Program within the Ohio Department of Natural Resources (ODNR). The DOW conducts its portion of the review subject to its statutory authority. For its' role as the state wildlife agency, the DOW provides guidance and recommendations on how to minimize and/or avoid impacts to threatened and endangered species, and other vulnerable wildlife. An environmental review considers documented species, the habitats that are present, and the potential impacts on species and habitats.

For many projects, demonstrating coordination with ODNR is a requirement that must be fulfilled in order to secure funding, licensing, or permitting, at both the state and federal level. Coordination letters that are prepared through ODNR's Environmental Review Program are done so under the authority of the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act (FWCA), the Clean Water Act (CWA), the Coastal Zone Management Act (CZMA), and other applicable laws and regulations. An environmental review represents coordination with ODNR and fulfills the necessary obligations.

If you are only interested in identifying which state listed species may be present within the vicinity of your project site or area of interest, please refer to the State Listed Wildlife Species by County and the State Listed Wildlife and Plant Species by County. These lists provide the species documented within each county, along with their respective state listing. Please note that these lists should only be used as a cursory reference, and not the only source of information when developing a project. Please note that this type of online review does not represent coordination with the ODNR or DOW.

Included in this Plan is a listing of State Listed Species for Athens County.

What to Submit for Environmental Review:

For an environmental review of a proposed project, Landowner must submit the following:

1. Project Description: Site location (e.g., county, latitude and longitude), Onsite habitats, Proposed work
Proposed impacts (for example, is in-water work necessary? Is tree cleaning necessary?),
Proposed BMP's
2. Maps that delineate the area of impact or work area: Topographic, Aerial Site plans
3. Photographs representative of the site
4. Shapefiles, KMZ files

To request an Environmental Review of your project, please submit the project information to the following dedicated email: environmentalreviewrequest@dnr.state.oh.us. Please allow at least 30 days for review and for the coordination letter to be returned.

Before any physical Construction Project is proposed for this tract, Landowner should submit a request for Environmental Review. Habitat does exist on this tract that may be suitable for some species listed.

Water - a general description of the water resources on the property: Soil and water conservation practices can be applied to this property. Perennial streams should always be buffered with trees. Livestock should be kept out of streams. Water control structures should be used in areas where access trails and roadways are present. The water and soil resources on your property should be protected and enhanced. Using the information in this plan and information available through your local Soil and Water Conservation District you can implement sound soil and water conservation practices on your property.

In the northern part of the ownership there are two un-named intermittent streams that join together and flow into Mill Creek. The riparian forested area (ST 8) of this farm is the Mill Creek stream drainage. This stream flow directly into Sugar Run.

The southwestern corner of the "southern" tract, near St. Rt. 550 is bisected by another intermittent stream, that follows Liars Corner Rd.

Wetlands – a general description of any wetland resources and/or vernal pools:

There are no identified certified wetlands located on this tract, that are identified in the National Wetlands Inventory Database only the un-named intermittent streams flowing thru the farm and Mill Creek, which flows along part of the property boundary. See attached map. Search was completed 7/2019.

Archeological/Historical Resources – a general consideration and description of such resources:

Historical and cultural resources are nonrenewable and can never be replaced once destroyed. These resources provide us a unique glimpse into the past and a look at the people and how they cared for the land. Good stewardship involves recognizing these resources and protecting them. These resources should be conserved whenever possible when they are present on the property.

No known significant / historical / ecological sites are listed in the State Registry for this tract. Landowner did not know of any confirmed sites on this farm.

Aesthetics – current or future aesthetic considerations for the woodland:

Forest aesthetics is often associated with older, more mature forests. However, it also has been said that beauty is in the eye of the beholder. Many folks enjoy mature forests with big trees...yet other folks find beauty in a young forest vibrant with the songs of early successional forest songbirds.

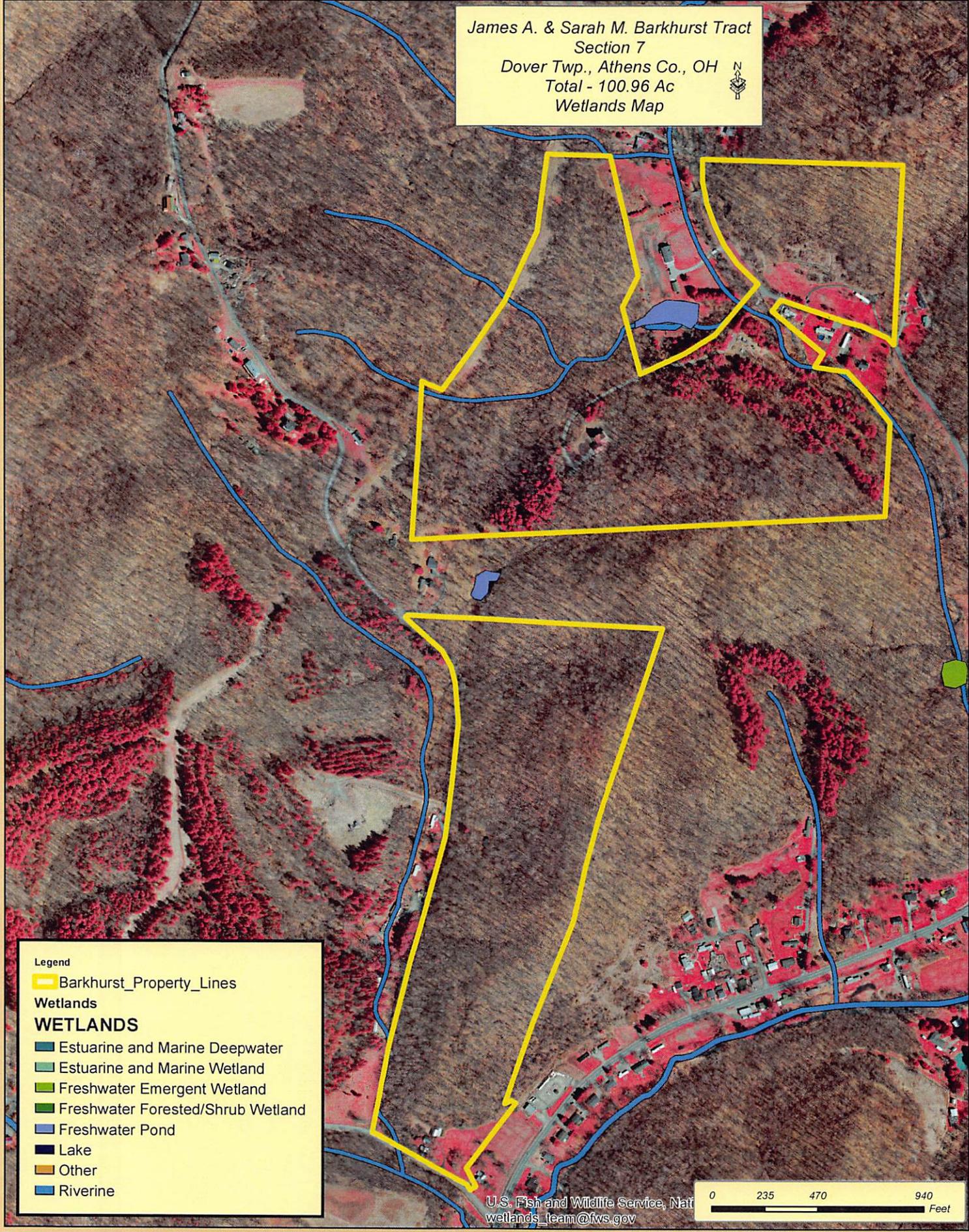
Forest stewardship management addresses these and other various aesthetic tastes and may weigh in visual goals of the neighbors. When you are weighing aesthetic goals, consider as a "group" 1) visual aesthetics, 2) the aesthetics of a dynamic functioning forest ecosystem, and 3) the particular wildlife species you hope to encourage at your property.

These tracts are visible from two Township Roads and State Route 550. so maintaining the integrity of the wooded landscape is an important aspect of the landowner's long-term objectives.

Best Management Practices – maintaining the integrity and productivity of woodland sites: As heavy as the last harvest was (in locations) the logger did grade the log roads during sale closeout. Trails are in good shape and erosion is minimal.

Basic protection measures used to guard your forest soils against problems related to soil/site limitations and equipment usage - rutting, excessive disturbance and compaction, erosion, and sedimentation. - are commonly referred to as Best Management Practices (BMP'S).

James A. & Sarah M. Barkhurst Tract
 Section 7
 Dover Twp., Athens Co., OH
 Total - 100.96 Ac
 Wetlands Map



Legend

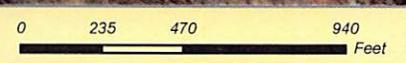
- Barkhurst_Property_Lines

Wetlands

WETLANDS

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

U.S. Fish and Wildlife Service, Natl
 wetlands_team@fws.gov



One very easy BMP landowners may use is simply to limit heavy equipment access to dry weather periods.

Hilly to steeply sloped terrain is more subject to site disturbance and subsequent soil erosion and sedimentation. Forest management often may still be accomplished on these steep areas with the use of BMP's. Even when the forest terrain is nearly level to gently rolling, and where slope does not present a hindrance to access for management activities, it is important to keep the trails up away from the small drainages where possible. This helps protect water quality by providing a buffer strip of undisturbed soil and leaf litter where any sediment can be trapped before reaching the drainage, if some should get washed off the path

During timber harvest activities, follow the Best Management Practices outlined in the Ohio State University Bulletin #916 – BMPs for Erosion Control for Logging Practices in Ohio. This booklet is available online at www.ohiodnr.gov/forestry/ or at your local Division of Forestry office.

Practically speaking, the use of BMP's to prevent soil loss is a sound agricultural practice that helps maintain site & timber productivity. Also, implementing BMP's helps you comply with Ohio's Agricultural Pollution Abatement Law (HB 88) standards for Silvicultural Operations. **There are no real issues with any of the trails on this farm. Most of the trails are grass/leaf covered. Some drainage crossings are rock based with little erosion potential. Some of the access trails have steep sections with some rutting potential and mitigation work will be recommended.**

Recreation – current and potential recreational activities at property:

Each forest has a unique history and character...and this continues to build under your stewardship. This forest can be used for hunting, hiking, or wildlife watching. Many landowners find enjoyment in doing improvement work in their woods. Others find pleasure in watching the birds. Some folks gain gourmet foods from the woods, gathering fruits, nuts, or wild mushrooms. Flowering trees like dogwood, redbud and serviceberry, whenever present, add to the beauty of the forest.

Maintaining trails will improve access and your opportunities for use of the area. A walk in the forest provides a time of learning but it can also be a time to relax. The woodlands can be a quiet place of solitude after a busy day at work, or anytime for that matter.

This entire area is used for primarily for deer hunting. Numerous deer blinds and stands are located throughout the property.

Forests of Recognized Importance –Globally, regionally & nationally significant large forest landscape areas of exceptional ecological, social, cultural or biological values

This forested tract does not contain any attributes that could contribute to what would be considered a unique landscape. Review of maps of the area and records did not reveal any indication of this tract being in a unique landscape classification. 7/2019

- Social or cultural values are aspects of a forest that are critical to the surrounding community's identity. They can range from significant historical features (such as sacred sites or burial grounds) to the forest's role within the community—for example, whether local residents have traditionally depended on the forest for berries, firewood, or other products.
- Biodiversity values are critical to preserving local flora and fauna. Such values could include rare ecosystems or habitats, or unusual communities of plant or animal species. Keep in mind that these ecosystems and species need not be on state or federal Threatened or Endangered Species lists—they may just be considered rare regionally or locally.
- Environmental values can benefit the whole community. Some examples are forests whose

presence helps protect local watersheds or prevent erosion in vulnerable areas.

When forestry professionals and other experts evaluate a forest as a potential Forest of Recognized Importance, they look at the entire landscape—not just a single stand of trees—and consider all of these values. Places that combine and contain these features are rare, so it's especially important to protect them.

There's another important point to keep in mind. Most Forests of Recognized Importance in the U.S. that are globally, nationally or regionally significant have already been identified and protected by state or federal government or have been put under a conservation easement by an environmental nonprofit organization. So, you're more likely to be near a Forest of Recognized Importance than to have one. But even if that's the case, there are still steps you can take in your own woods to help protect that Forest of Recognized Importance.

So, given this Standard for the Tree Farm program, you do not have any FORI on your property, but your property is still vital to protecting the water quality of Ohio.

Fire – identify hazards, fire breaks, safety zones, note dead trees from insects or disease, etc.:

Properties and homes in Ohio are not immune to the risks of fire and fire-related damage. Spring and fall are Ohio's main "fire seasons". A step one may take to protect one's forest is to have a system of paths that may double as fire breaks. For the home site, maintain good access for fire vehicles, create a defensible space around your home and outbuildings by removing flammable materials such brush, leaves, sticks, and twigs; remove these from roofs and gutters too. Landscape around buildings with less flammable plants and materials, avoid evergreens by or near the home, keep an outdoor water source, and avoid outdoor burning. For more information on outdoor fire safety and fire safety around your home, Firewise brochures are available from the Ohio Division of Forestry (toll-free 877-247-8733). You may also contact your local fire department with questions about Firewise and home safety regarding wildfire.

Ohio Fire Laws: ORC 1503.18 regarding kindled fires prohibits outdoor open burning statewide in unincorporated areas during the months of March, April, May, October, and November between the hours of 6:00 am and 6:00 pm. ORC 1503.18 is administered by the Ohio Division of Forestry; call toll-free 877-247-8733 with questions. OAC 3745.19 regarding outdoor burning is administered by the Ohio Environmental Protection Agency (EPA); EPA notification is required for many types of open burns in Ohio. Call 614-644-2270 with questions or visit www.epa.ohio.gov/dapc/general/openburning.aspx.

Fire will not be used as a management tool on this tract in the wooded areas.

Carbon Cycle – Healthy, sustainably managed forests can help to reduce atmospheric carbon:

When you as a forest landowner choose to maintain your forest land rather than convert it a non-forest use, you are making a significant contribution to the carbon sequestration equation; a healthy forest sequester carbon. Forest landowners that hold an interest or focus upon the carbon cycle have opportunities to enhance carbon sequestration on the property by conducting various silvicultural practices that enhance the forest's ability to sequester carbon, and by re-establishing woodlands on non-forested land. Active forest managers may find opportunities for carbon trading and participation in ecosystem service markets.

Forest Health – a general description of the health of the woodland: Most of the forest areas are in fair condition, considering the lack of actual forest management that had been done by the previous Owners. The “15 ac” tract has the best stand of mature Oaks on this ownership. The majority of the forested areas on all of the tracts are the result of natural succession, after heavy pasturing and harvesting years ago. Emerald Ash Borer (EAB) infestation has had an impact on the forested areas of this tract. Non-native invasive plants, like Bush Honeysuckle, Privet, Japanese Knotweed, Burning Bush, Oriental Bittersweet and Autumn Olive in particular, are well established in areas & spreading (Stands 2,6,7,8,9,10,12,13, & 15), and is a serious issue.

No problematic insect pests or diseases were noted during the woodland review, except for EAB and White Pine Adelgid. Stand 1 shows good overall health and vigor. Control of grapevines on selected crop trees will guard those crop trees from the damage risks posed by this woody native vine. However, native grapevines are part of the forest ecosystem; keeping selected vines may be considered a part of maintaining overall forest health.

Oak species are preferred food sources for the Gypsy moth. The good news is that after the initial wave of Gypsy moths showed up in Ohio, a fungus showed up that keeps these critters in pretty good check. The fungus is named *Entomophaga miamica*... "Em" for short. Still, it's a good idea to keep tabs on any oaks present in the forest to see if any egg masses start to show up in July-August - identified as a characteristic tan fuzzy oval mass that looks like Velcro. If you see egg masses, and can count more than 50 during a five minute walk around the oaks, then your trees are at risk of being partially or completely defoliated if the Spring is very dry and therefore not conducive to development of the Em fungus for natural control. There are options for control of Gypsy moth using aerial application of pesticides to the tree leaves, so that larvae ingesting such pesticides then die. One such pesticide is actually a "biocide" - the bacteria *Bacillus thuringiensis* (Bt).

Another woodland pest of great concern is the emerald ash borer (EAB), an invasive insect from Asia that only attacks ash trees. The larvae eat the living tissue of ash trees just underneath the bark. With a large enough infestation, this process essentially chokes off the flow of water and nutrients within the tree which leads to the tree's mortality. This insect can spread naturally from tree to tree, as well as artificially through the movement of ash material such as firewood.

You can reduce the risk of losses by gradually reducing the ash component of your woodlot. When doing a forest thinning or a crop tree release, if you have a choice between an ash and another desirable species, you may choose to cut the ash and let the other species grow. By gradually doing this ash reduction throughout your woods, you can avoid any serious impact on your woods if the emerald ash borer does eventually get there. **Note –too late for this- EAB has already infected this area.**

The best thing you can do now is to stay informed. The following websites should be checked periodically for the most up to date information on the emerald ash borer:

<http://www.agri.ohio.gov/eab>

<http://www.emeraldashborer.info/>

<http://ashalert.osu.edu/>

<http://www.ohiodnr.com/forestry/health/eab.htm>

White Pine Adelgid is present in Stand 9, the White Pine plantations. Some mortality, wind throws and broken tops in trees are evidence of stressed trees.

How To Maintain Forest Health

Maintaining the health of your forest is important to help prevent damaging problems from interfering with the benefits you receive from your forest. We recommend that you consider the following general guidelines to maintain forest health:

1. *Consider that some amount of damage from disease, wildlife pest, insects, and weather is normal and can be beneficial to the overall health of your forest.*
2. *Remove excessive numbers of over mature, weak or damaged trees that are most likely to be affected by damaging agents. However, consider that some of these trees are beneficial to certain wildlife species.*
3. *Encourage mixtures of tree species to minimize damage from problems that attack specific types trees.*
4. *Discourage tree species that are not well adapted for the climate and soil properties in your area.*
5. *Maintain a density of trees that provides them with adequate growing space.*
6. *Avoid wounding your trees and compacting the soil during treatments and recreational activities.*
7. *Prevent livestock from grazing in the woods.*
8. *Avoid implementing treatments during or soon after events like droughts or outbreaks of insects or diseases.*
9. *Stay informed of pest alerts and current problems.*
10. *Monitor your forest frequently for symptoms of damaging agents.*
11. *Consider utilizing pest suppression programs recommended by your state or county forestry agency.*
12. *Support regulations geared towards reducing the spread of non-native pests and reducing levels of air pollution.*
13. *Follow quarantine regulations for specific pests and their host plants.*
14. *Salvage dead or damaged trees after a problem occurs.*

Other Resources – a general description of any other notable woodland resources:

Associated forest resources vary somewhat from forest to forest, but typically include a variety of herbaceous plants present within the woodlands or old fields within a property.

Spring, summer, and fall wildflowers provide non-timber benefits to anyone who takes the time to enjoy the blossoms. Along with the flowers, there is a vast array of insect life – pleasant and sometimes unpleasant – that is essential to good ecosystem function. Native and non-native honeybees and butterflies are examples of beneficial insects. Mushrooms, medicinal shrubs and herbs and maple syrup are more examples of other beneficial forest resources.

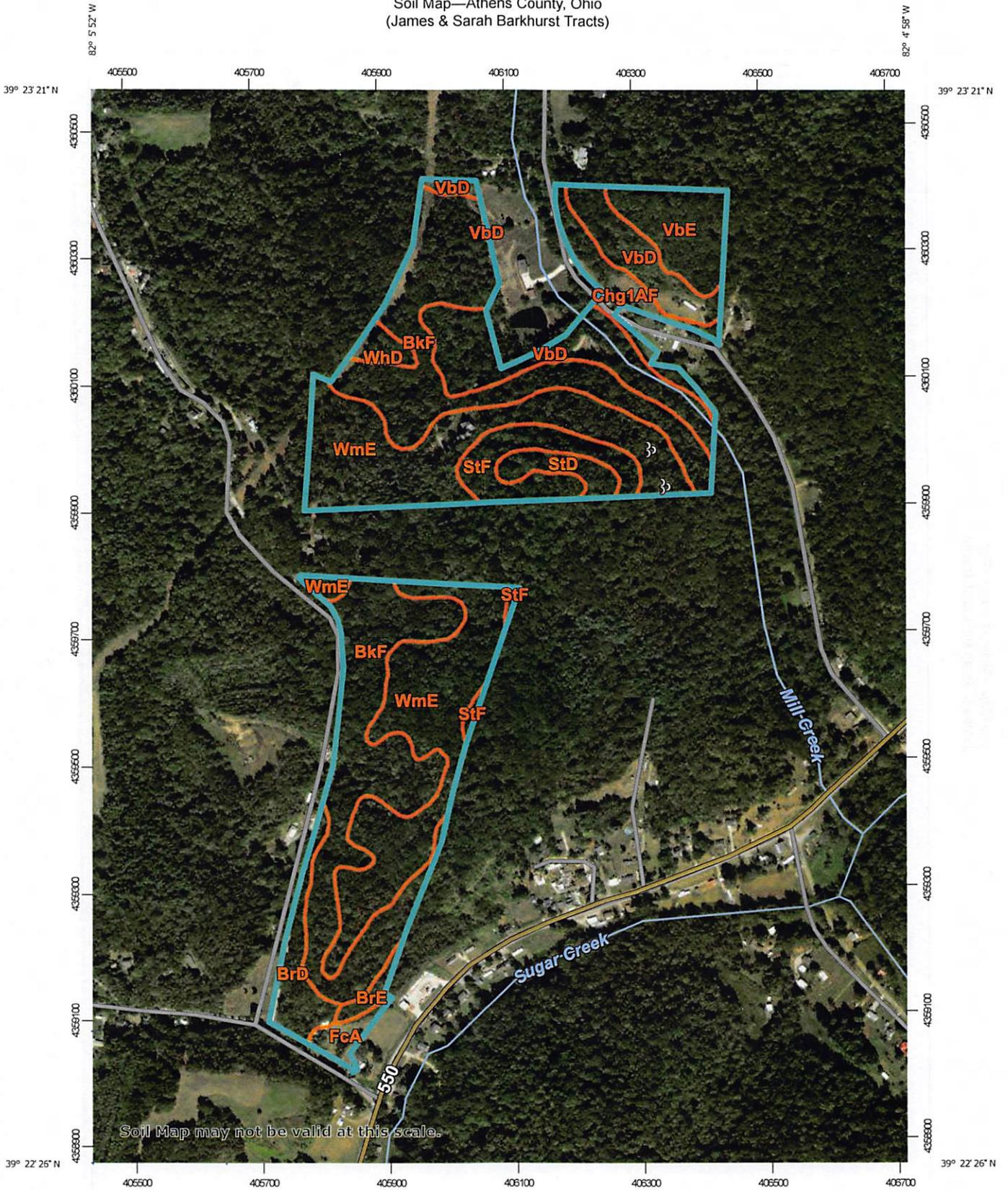
Addendums

- Soils Report with - Soil Map and Map Unit Description
- Forest Productivity (Site Index)

Landowner Plan packet also contains:

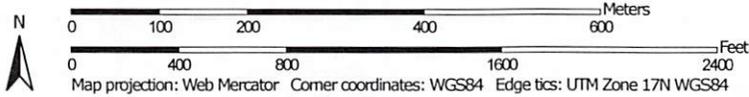
- How to mark your property lines
- How to treat grapevines.
- Forestry Terms
- Oriental Bittersweet Fact Sheet
- Burning Bush Fact Sheet
- Autumn Olive Fact Sheet
- Barberry Fact Sheet
- Japanese Vine Honeysuckle
- Japanese Stilt Grass Fact Sheet
- Hard Mass Production handout

Soil Map—Athens County, Ohio
(James & Sarah Barkhurst Tracts)



Soil Map may not be valid at this scale.

Map Scale: 1:8,260 if printed on A portrait (8.5" x 11") sheet.



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 1:15,800.

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:

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: Athens County, Ohio

Survey Area Data: Version 20, Sep 17, 2018

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

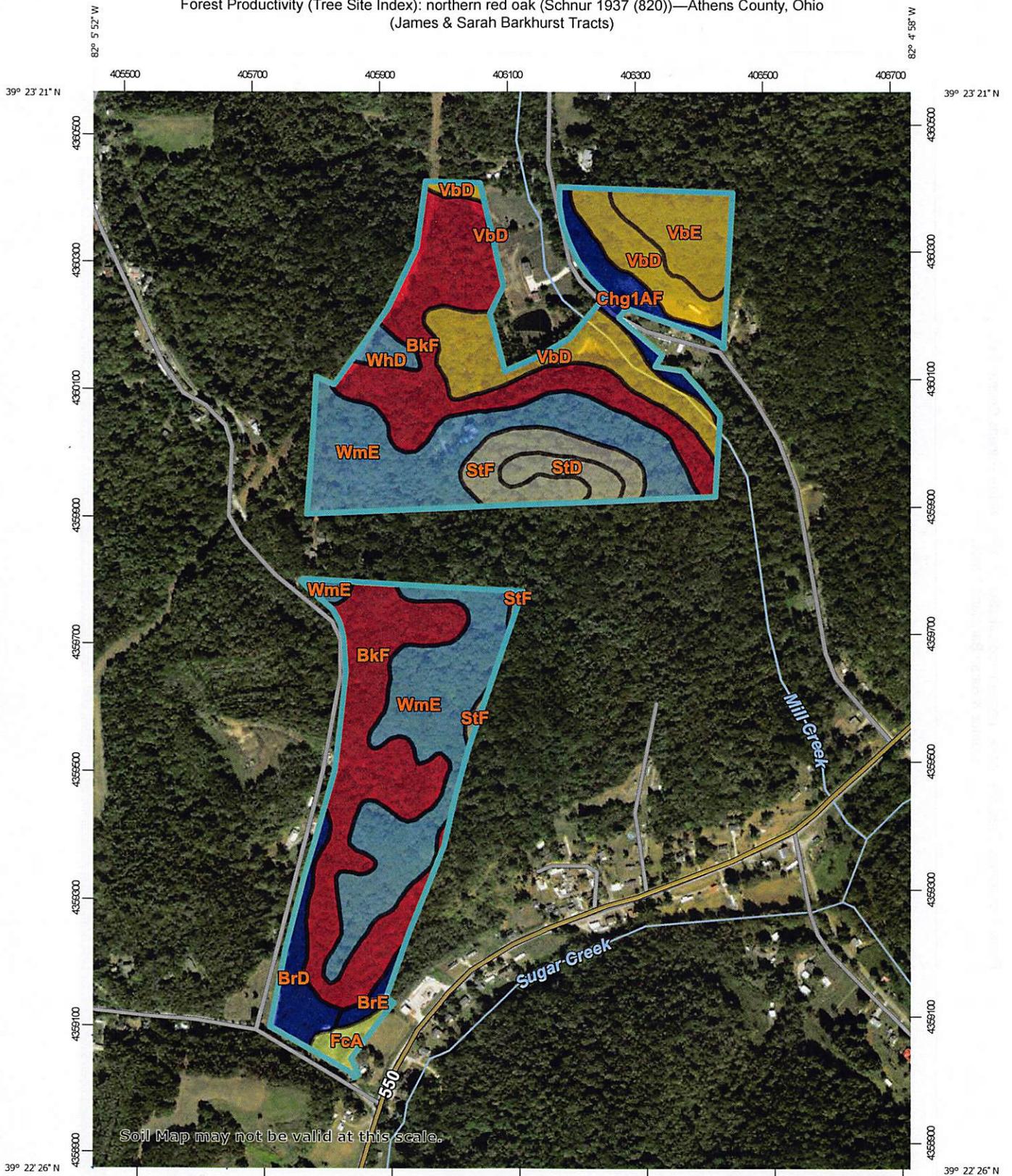
Date(s) aerial images were photographed: Apr 5, 2012—Mar 26, 2017

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.

Map Unit Legend

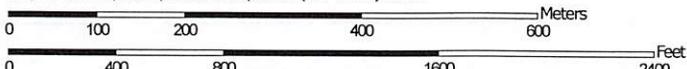
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BkF	Berks-Westmoreland silt loams, 40 to 70 percent slopes	32.8	33.8%
BrD	Brookside silt loam, 15 to 25 percent slopes	3.3	3.4%
BrE	Brookside silt loam, 25 to 40 percent slopes	0.8	0.8%
Chg1AF	Chagrin silt loam, 0 to 3 percent slopes, frequently flooded	3.7	3.8%
FcA	Fitchville silt loam, 0 to 3 percent slopes	1.3	1.3%
StD	Steinsburg sandy loam, 15 to 25 percent slopes	1.9	2.0%
StF	Steinsburg sandy loam, 40 to 70 percent slopes	5.3	5.5%
VbD	Vandalia-Brookside complex, 15 to 25 percent slopes	12.3	12.6%
VbE	Vandalia-Brookside complex, 25 to 40 percent slopes	5.1	5.3%
WhD	Westmoreland-Guernsey silt loams, 15 to 25 percent slopes	1.1	1.1%
WmE	Westmoreland-Upshur complex, 25 to 40 percent slopes	29.5	30.4%
Totals for Area of Interest		97.1	100.0%

Forest Productivity (Tree Site Index): northern red oak (Schnur 1937 (820))—Athens County, Ohio
(James & Sarah Barkhurst Tracts)



Soil Map may not be valid at this scale.

Map Scale: 1:8,260 if printed on A portrait (8.5" x 11") sheet.



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



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 ≤ 70
 > 70 and ≤ 77
 > 77 and ≤ 80
 > 80 and ≤ 81
 > 81 and ≤ 86
 Not rated or not available

Soil Rating Lines

 ≤ 70
 > 70 and ≤ 77
 > 77 and ≤ 80
 > 80 and ≤ 81
 > 81 and ≤ 86
 Not rated or not available

Soil Rating Points

 ≤ 70
 > 70 and ≤ 77
 > 77 and ≤ 80
 > 80 and ≤ 81
 > 81 and ≤ 86
 Not rated or not available

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 1:15,800.

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:
 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: Athens County, Ohio
 Survey Area Data: Version 20, Sep 17, 2018

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

Date(s) aerial images were photographed: Apr 5, 2012—Mar 26, 2017

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): northern red oak (Schnur 1937 (820))

Map unit symbol	Map unit name	Rating (feet)	Acres in AOI	Percent of AOI
BkF	Berks-Westmoreland silt loams, 40 to 70 percent slopes	70	32.8	33.8%
BrD	Brookside silt loam, 15 to 25 percent slopes	86	3.3	3.4%
BrE	Brookside silt loam, 25 to 40 percent slopes	86	0.8	0.8%
Chg1AF	Chagrin silt loam, 0 to 3 percent slopes, frequently flooded	86	3.7	3.8%
FcA	Fitchville silt loam, 0 to 3 percent slopes	80	1.3	1.3%
StD	Steinsburg sandy loam, 15 to 25 percent slopes		1.9	2.0%
StF	Steinsburg sandy loam, 40 to 70 percent slopes		5.3	5.5%
VbD	Vandalia-Brookside complex, 15 to 25 percent slopes	77	12.3	12.6%
VbE	Vandalia-Brookside complex, 25 to 40 percent slopes	77	5.1	5.3%
WhD	Westmoreland-Guernsey silt loams, 15 to 25 percent slopes	81	1.1	1.1%
WmE	Westmoreland-Upshur complex, 25 to 40 percent slopes	81	29.5	30.4%
Totals for Area of Interest			97.1	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: northern red oak

Site Index Base: Schnur 1937 (820)

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Forestland Productivity

This table can help forestland owners or managers plan the use of soils for wood crops. It shows the potential productivity of the soils for wood crops.

Potential productivity of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. 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. Commonly grown trees are those that forestland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Reference:

United States Department of Agriculture, Natural Resources Conservation Service, National Forestry Manual.

Report—Forestland Productivity

Forestland Productivity—Athens County, Ohio				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber <i>Cu ft/ac/yr</i>	
BkF—Berks-Westmoreland silt loams, 40 to 70 percent slopes				
Berks	Black oak	70	57.00	Black oak, Eastern white pine, Northern red oak, Red pine, Tuliptree, Virginia pine, White ash
	Northern red oak	70	57.00	
	Virginia pine	70	114.00	
Westmoreland	Eastern white pine	75	143.00	Black cherry, Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Northern red oak	81	57.00	
	Tuliptree	90	86.00	
BrD—Brookside silt loam, 15 to 25 percent slopes				
Brookside	Northern red oak	86	72.00	Northern red oak, Tuliptree
	Tuliptree	96	100.00	

Forestland Productivity--Athens County, Ohio				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber <i>Cu ft/ac/yr</i>	
BrE—Brookside silt loam, 25 to 40 percent slopes				
Brookside	Black cherry	—	—	Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Black walnut	—	—	
	Northern red oak	86	72.00	
	Sugar maple	—	—	
	Tuliptree	96	100.00	
	White ash	—	—	
	White oak	—	—	
Chg1AF—Chagrin silt loam, 0 to 3 percent slopes, frequently flooded				
Chagrin	Black cherry	—	—	Black walnut, Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Black walnut	—	—	
	Northern red oak	86	72.00	
	Sugar maple	86	57.00	
	Tuliptree	96	100.00	
	White ash	—	—	
	White oak	—	—	
FcA—Fitchville silt loam, 0 to 3 percent slopes				
Fitchville	Northern red oak	80	62.00	Northern red oak, Pin oak
	Pin oak	90	72.00	
StD—Steinsburg sandy loam, 15 to 25 percent slopes				
Steinsburg	Northern red oak	—	—	Black cherry, Eastern white pine, Red pine, Tuliptree, White ash
	Tuliptree	—	—	
	Virginia pine	70	—	
StF—Steinsburg sandy loam, 40 to 70 percent slopes				
Steinsburg	Northern red oak	—	—	Black cherry, Eastern white pine, Red pine, Tuliptree, White ash
	Tuliptree	—	—	
	Virginia pine	70	—	

Forestland Productivity--Athens County, Ohio				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			<i>Cu ft/ac/yr</i>	
VbD—Vandalia-Brookside complex, 15 to 25 percent slopes				
Vandalia	Northern red oak	77	57.00	Austrian pine, Eastern white pine, Tuliptree, Virginia pine
	Tuliptree	90	86.00	
	Virginia pine	80	114.00	
Brookside	Black cherry	—	—	Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Black walnut	—	—	
	Northern red oak	86	72.00	
	Sugar maple	—	—	
	Tuliptree	96	100.00	
	White ash	—	—	
	White oak	—	—	
VbE—Vandalia-Brookside complex, 25 to 40 percent slopes				
Vandalia	Northern red oak	77	57.00	Austrian pine, Eastern white pine, Tuliptree, Virginia pine
	Tuliptree	90	86.00	
	Virginia pine	80	114.00	
Brookside	Black cherry	—	—	Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Black walnut	—	—	
	Northern red oak	86	72.00	
	Sugar maple	—	—	
	Tuliptree	96	100.00	
	White ash	—	—	
	White oak	—	—	

Forestland Productivity--Athens County, Ohio				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			<i>Cu ft/ac/yr</i>	
WhD--Westmoreland-Guernsey silt loams, 15 to 25 percent slopes				
Westmoreland	Eastern white pine	75	143.00	Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Northern red oak	81	57.00	
	Tuliptree	90	86.00	
Guernsey	Black cherry	—	—	Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Black walnut	—	—	
	Northern red oak	78	57.00	
	Sugar maple	—	—	
	Tuliptree	95	100.00	
	White ash	—	—	
WmE--Westmoreland-Upshur complex, 25 to 40 percent slopes				
Westmoreland	Eastern white pine	75	143.00	Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Northern red oak	81	57.00	
	Tuliptree	90	86.00	
Upshur	Eastern white pine	90	172.00	Austrian pine, Eastern white pine, Tuliptree, Virginia pine
	Northern red oak	70	57.00	
	Tuliptree	90	86.00	
	Virginia pine	70	114.00	

Data Source Information

Soil Survey Area: Athens County, Ohio
 Survey Area Data: Version 20, Sep 17, 2018