Athens Co. Auditor

Woodland Stewardship Management Plan

RECEIVED

JUL 20 2023

Jill Davidson
Athens County Auditor

Owner's Information:

Owners: Charles Jeffery (Jeff) Tope Penny Tope

Signed: _____ Signed: _____

Date: 7-10-23 County: Athens Farm Bill Program: EQIP

Case Number: _____ Contract Number & Item Number: 745E342303J 1

Preparer's Information:

Prepared by: Dean A. Berry TSP Number & Expiration Date: #10-6547 12/27/24.

I, as a TSP for NRCS Farm Bill Programs, certify that services provided: comply with all Federal, State, Tribal, and Local laws and requirements; meet applicable program requirements and recommended planned practices are based on NRCS conservation practice standards and specifications; are consistent with and meet the conservation program goals and objectives for which the program contract was entered into by the client; and incorporate alternatives that are both cost effective and appropriate to address the resource issues.

.

Signature: _____

Dean A. Berry, ACF Date: 6/13/2023
Woodland Management Service LLC
10935 Rosewood Land
Athens, Ohio 45701
740-541-4647, fatlabtreefarm@gmail.com

NRCS Representative Signature: _____ Date: _____

This plan is valid for the period beginning 6/13/2023 and ending 6/12/2032.

Plan Status: Updated Previous 10 yr. Stewardship Plan written on 1//01/2012 by D. A. Berry, Consulting Forester.

CPA 106 Forest Management Plan Template FFY23

Woodland Stewardship Management Plan

Owners	Jeff & Penny Tope		
Address	7444 Lemaster Rd.		
	Athens, Ohio 45701		
Phone	740-797-4859	Case Number	
Cell	740-541-0467	Email Address	tope@iCloud.com
County	Athens	Township/Village/City:	Sec 30, Athens Twp.
Parcel(s):	A040020017400 & A040020018800		
Location:	Located between Lemaster Rd. & Poston Station Rd., near The Plains, OH.		

Woodland Stewardship Acreage: 103.8 Non-woodland Stewardship Acreage*: 12.74

Total Property Acres 116.54

* Non-woodland acres for which stewardship recommendations are made. **Stand: 1**

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

☒ Ohio Forest Tax Law ☐ American Tree Farm Program

☒ Environmental Quality Incentives Program (EQIP) ☒ CAUV

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

Longitude: W-82.1503 Latitude: N39.3707

Landowner 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. Maintain healthy woods by limiting the impact of non-native invasive species identified in the forest landscape.
3. Improve habitat for game and non-game species.

General Woodland Description

Jeff & Penny purchased this 116-acre tract in 1988 and immediately began making improvements to the land. Structures built, pond constructed and access trails through the property. During the Summer of 2010 a tornado damaged the northern portion of the forestlands. This area was salvage harvested to recover some of the value. In 2012 they had a Stewardship Plan developed for their entire ownership. In the last 10 years the woods have healed from the tornado and begun to mature into a climax forest. The major issue that is affecting the future development of the woods is the number of grapevines in the trees, populations of non-native invasive shrubs and Japanese stiltgrass established in the trails and "disturbed" soil areas. These are things to be addressed in the next 10 year period.

Inventory Method: Plot Sampling

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 measurable.
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.

You may access "The Dictionary of Forestry" for free at SAF at www.dictionaryofforestry.org. If internet access is not available, one may purchase a printed version from SAF (toll free 866-897-8760).

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

PARID: A040020018800
TOPE CHARLES JEFFREY

LEMASTER RD

Parcel

Address	LEMASTER RD
Unit	
Class	A - AGRICULTURAL
Tax Roll	RP_OH
Land Use Code	122 - A - TIMBER NO 10% RLB
Neighborhood	00035003 - A04
Total Acres	68.84
Taxing District	A04
District Name	THE PLAINS FIRE DIST
Gross Tax Rate	97.08
Effective Tax Rate	62.713762

Owner

Owner	TOPE CHARLES JEFFREY & PENNY

Tax Mailing Name and Address

Mailing Name 1	TOPE CHARLES JEFFREY
Mailing Name 2	& PENNY
Address 1	7444 LEMASTER RD
Address 2	
Address 3	ATHENS OH 45701
Mortage Company	
Mortage Company Name	
Treas Code	

Legal

Legal Desc 1	SEC 30 FRA 153 68.84 AC
Legal Desc 2	
Legal Desc 3	
Legal Acres	68.84

Homestead Credits

Homestead Exemption	NO
Owner Occupancy Reduction	NO

PARID: A040020017400
TOPE CHARLES JEFFREY **7444 LEMASTER RD**

Parcel

Address	7444 LEMASTER RD
Unit	
Class	A - AGRICULTURAL
Tax Roll	RP_OH
Land Use Code	101 - A - CASH GRAIN OR GENERAL FARM
Neighborhood	00035003 - A04
Total Acres	47.7
Taxing District	A04
District Name	THE PLAINS FIRE DIST
Gross Tax Rate	97.08
Effective Tax Rate	62.713762

Owner

Owner	TOPE CHARLES JEFFREY & PENNY

Tax Mailing Name and Address

Mailing Name 1	TOPE CHARLES JEFFREY
Mailing Name 2	& PENNY
Address 1	7444 LEMASTER RD
Address 2	
Address 3	ATHENS OH 45701
Mortage Company	
Mortage Company Name	
Treas Code	

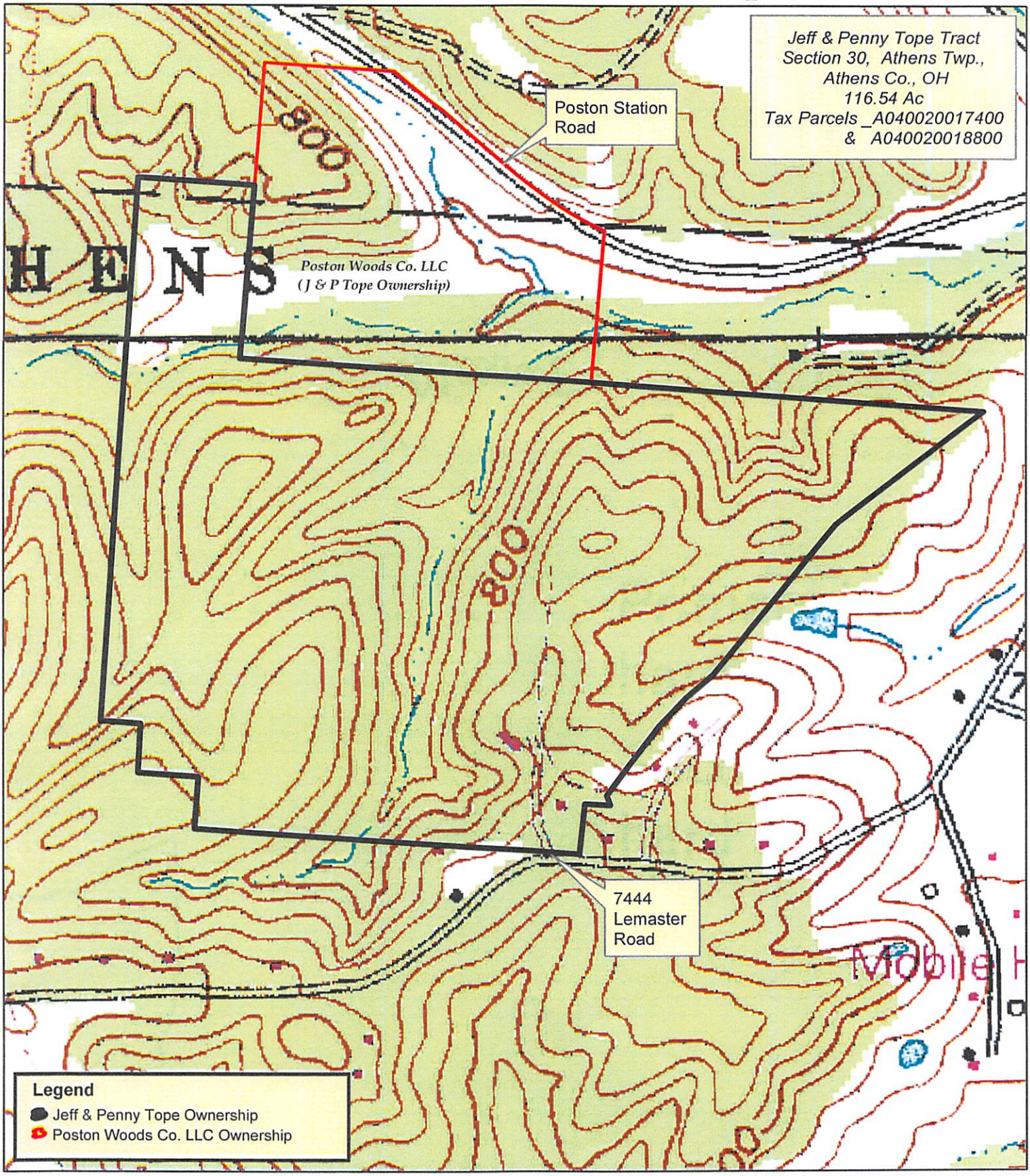
Legal

Legal Desc 1	SEC 30 FRA 152 47.70 AC
Legal Desc 2	
Legal Desc 3	
Legal Acres	47.7

Homestead Credits

Homestead Exemption	NO
Owner Occupancy Reduction	YES

Woodland Location Map



June, 2023

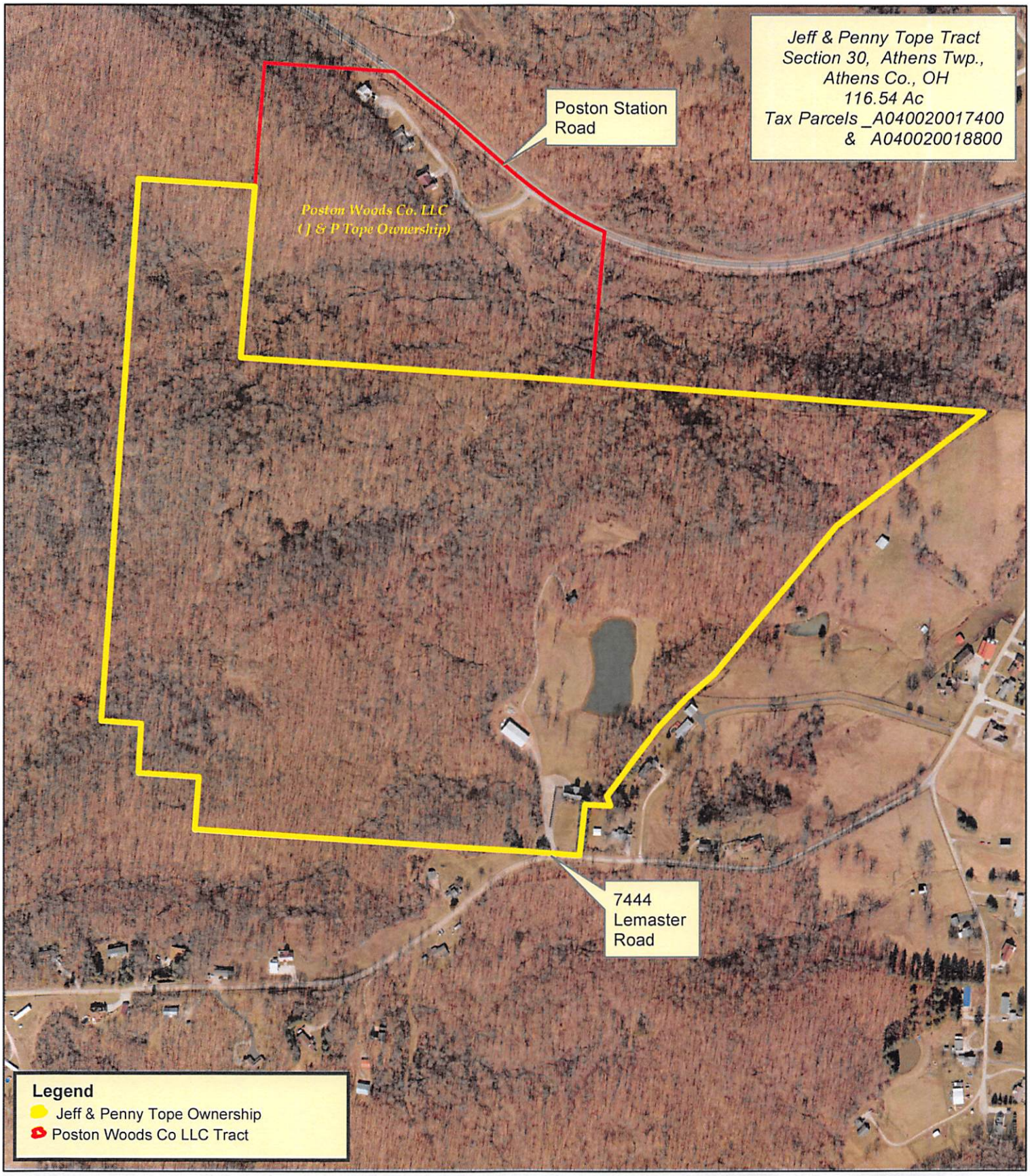
-82.1503 39.3707

Prepared with the assistance from
USDA - Natural Resource Conservation Service.
The Plains Service Center
Athens Soil & Water Conservation District
Assisted by Dean A. Berry TSP 10-6547

0 220 440 880 Feet

Disclaimer: This drawing is not an actual survey, and is for general information purposes only.

Woodland Location Map



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0 220 440 880 Feet

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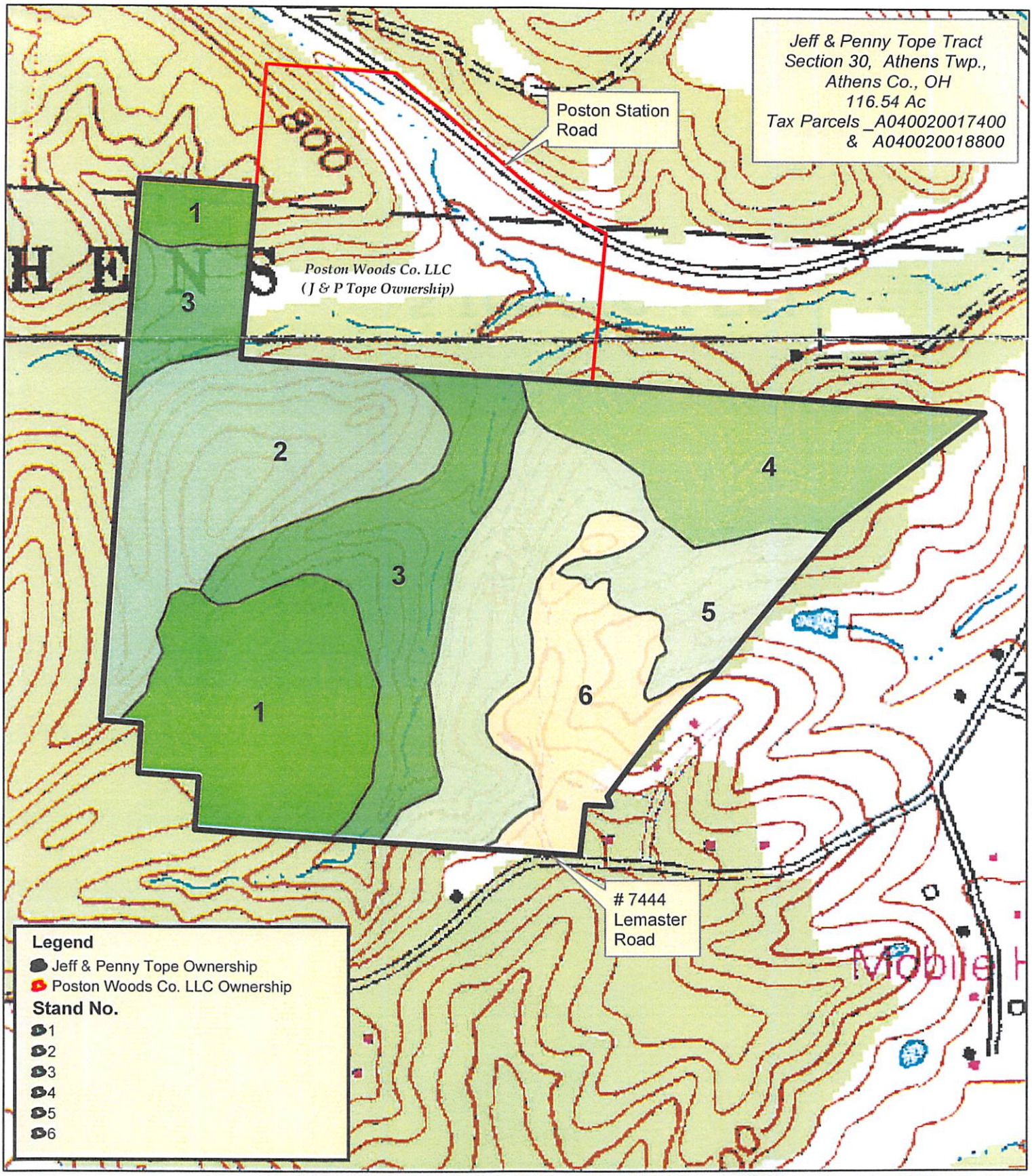
Woodland Stand Map



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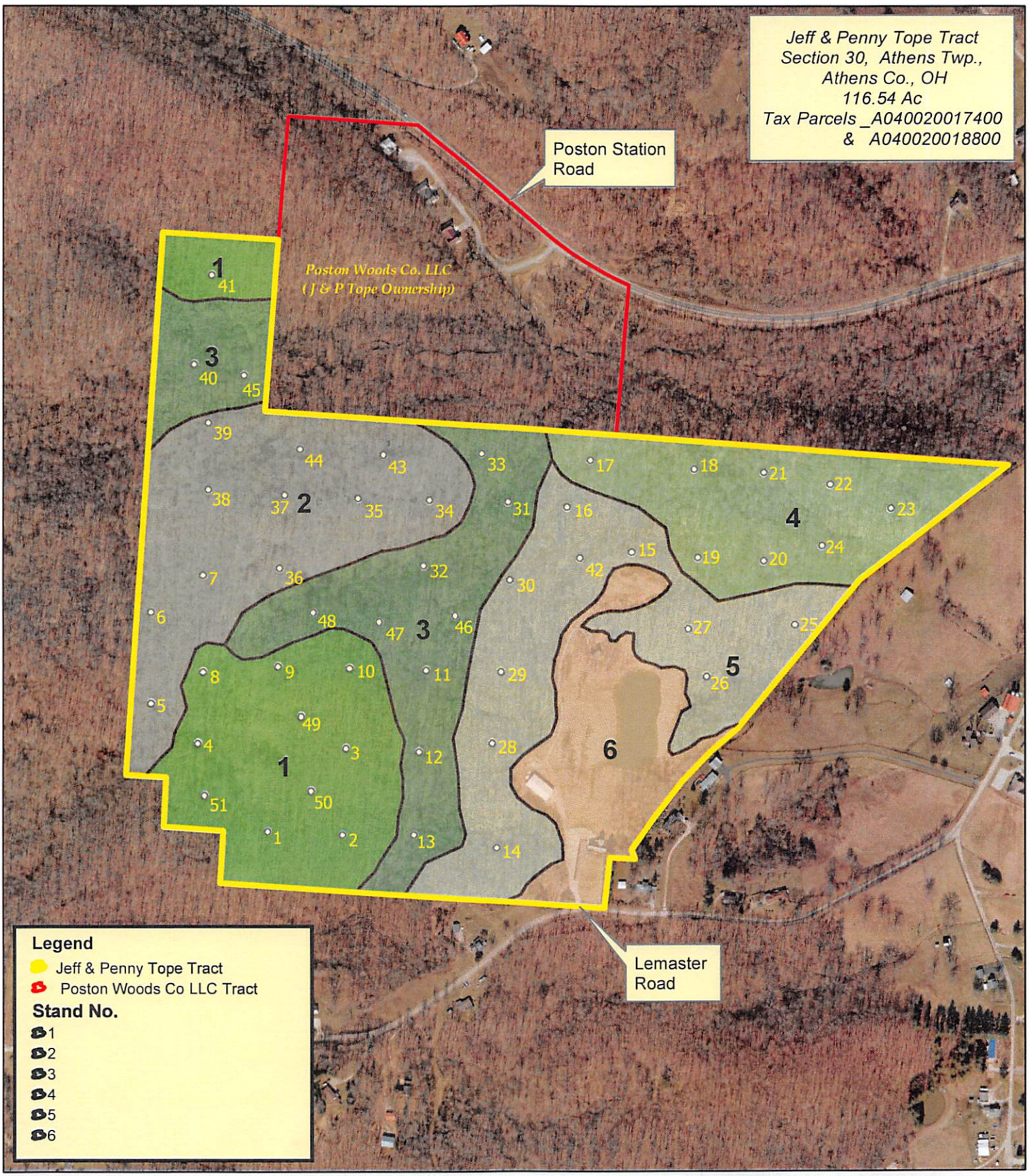
Woodland Stand Map



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0 220 440 880 Feet

Disclaimer: This drawing is not an actual survey, and is for general information purposes only.

Woodland Stand Description and Management Recommendations

Stand #1 - **21.03** acres total (2 parts)

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

Forest Type or Dominant Vegetation: Oak-Hickory

Stand Diameter or Size Class: All size classes

Stocking Level: Fully stocked **Basal Area:** 107 **(ft2/acre)** 4" & > dbh

Trees per acre: 219_4" & > dbh **Note** –understory composition mainly: hickory, beech, maple seedlings/saplings at adequate populations for site.

Diameter Distribution by Species: See attached Stand Summary.

Stand History: Old-Field Reversion 70+ years ago.

Topography: Gently sloping low ridgetop and south facing slope area.

Site Index Value and Species: See in Plan Addendum – GuC, BrD, WmD, WhE, WkF, Tuliptree & Red Oak Site Indexes

Stand Age Estimation: 60-65 yrs.

Average Canopy Height: 60'-70'

Invasive plants or insects impacting this stand: Privet & autumn olive along edges of small field area, J. stiltgrass in all trails, barberry & multi flora rose in canopy openings, scattered grapevines.

Level of invasive plants in the stand: light in most of the stand with limited number of grapevines throughout area (except area near Plot 41 - no vines noted)

Client Objectives: Allow area to develop into a mixed oak species stand, reduce the non-native invasive shrubs & grapevines in this area to increase hard mast production.

Stand Description: This stand is comprised of 2 parts, a small 3 ac area in the NW corner of this tract (adjacent to addition Tope owned lands) and then the main ridgetop area in the SW corner of this tract. The small south facing slope area that is separate from the main portion of the stand is mainly pulpwood/ small sawlog trees of mixed oak species. Low quality trees in this area. Whereas the larger body of this stand contains higher quality sawlog sized oak trees. This area has an open understory with the most invasive shrubs found along the trails and in canopy openings. Limited grapevines scattered throughout the area. Some wind damage was noted in the area.

Past management activities completed in this stand: Property lines located but need remarked, trails maintained, some invasive control completed, some grapevines cut in part of the area.

Management Recommendations:	***EQIP Practice Code:***	***EQIP Practice Name:***
Continue to locate and mark property lines with paint/signage to deter trespass.		
Maintain grass/leaf cover on the trails to reduce erosion potential. Work on reducing the amount of Japanese Stiltgrass that is prevalent in the trails.	315	Herbaceous Weed Control
Work on reducing the impact of invasive shrubs in this area. Cut grapevines from all the oak, sugar maple, cherry & poplar trees.	314	Brush Management

Is a timber harvest recommended? No Not in this 10yr. management period.

Comments: St John's Wort found on the ridgetop opening in the center of the area (close to the deer stand & Plot #49).

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation: As Listed in Dominant Species
Desired Stand Structure: Uneven Aged

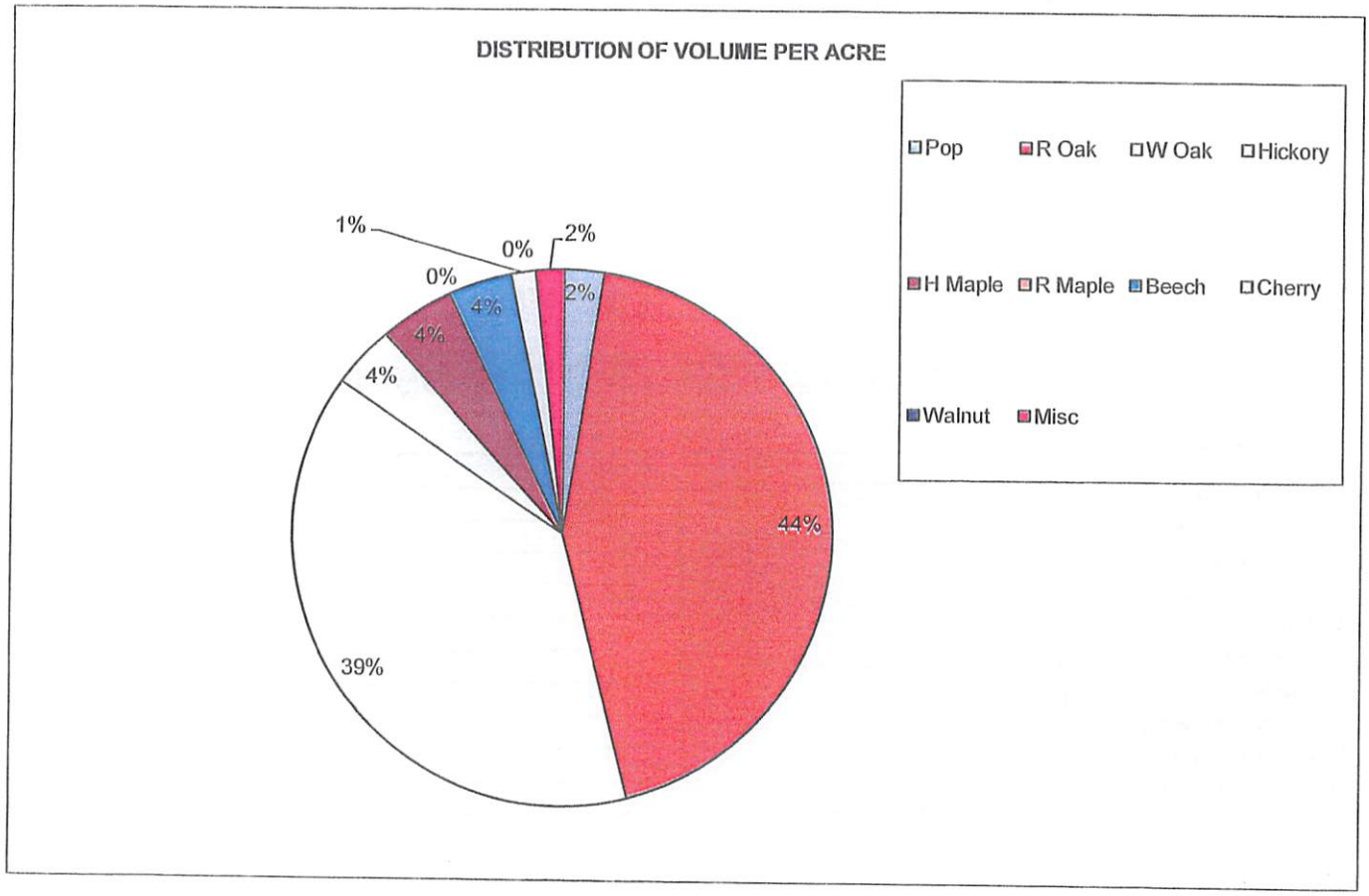
Descriptions of Alternatives and Preferred Alternative to meet desired future conditions:

1. Landowner does nothing and allows area to continue to develop naturally. Populations of autumn olive, barberry and privet will increase. Trails will become overgrown with stiltgrass, invasive shrubs and be impassable.
   Not a preferred (or recommended) option.

2. Landowner cuts/treats with approved herbicides any non-native invasive shrubs identified in this area (per USDA 314 Brush Management specifications). Grapevines will be cut from "crop" trees. Landowner treats the Japanese Stiltgrass that has become established in this area (per USDA 315 Herbaceous Weed Treatment specifications). Trails will be maintained. Food plot will be maintained along with additional wildlife habitat enhancement practices implemented.
   Preferred Alternative

CPA-106 Stewardship Plan Forest Inventory (2023)

1. Landowner's name:	Jeff & Penny Tope
2. Name, number, or location of the tract:	Stand 1
3. Acreage of the tract (*A*):	21.03
4. Date of the inventory:	5/23/2023
5. Forester's name:	Dean A. Berry
6. Prism or angle gauge basal area factor (*BAF* or *F*):	10.0
7. Number of sample points (*n*):	11
8. Length of log (12 ft. or 16 ft.):	16
9. Plot size for vines (Ex. 1/20 Acre=0.05):	N/A
10. Type of inventory:	Variable plot size


DISTRIBUTION OF VOLUME PER ACRE
Pop
R Oak
W Oak
Hickory
H Maple
R Maple
Beech
Cherry
Walnut
Misc
1%
0%
2%
0%
4%
4%
4%
2%
44%
39%

CPA-106 Stewardship Plan Forest Inventory (2023)
SUMMING ALL TREES

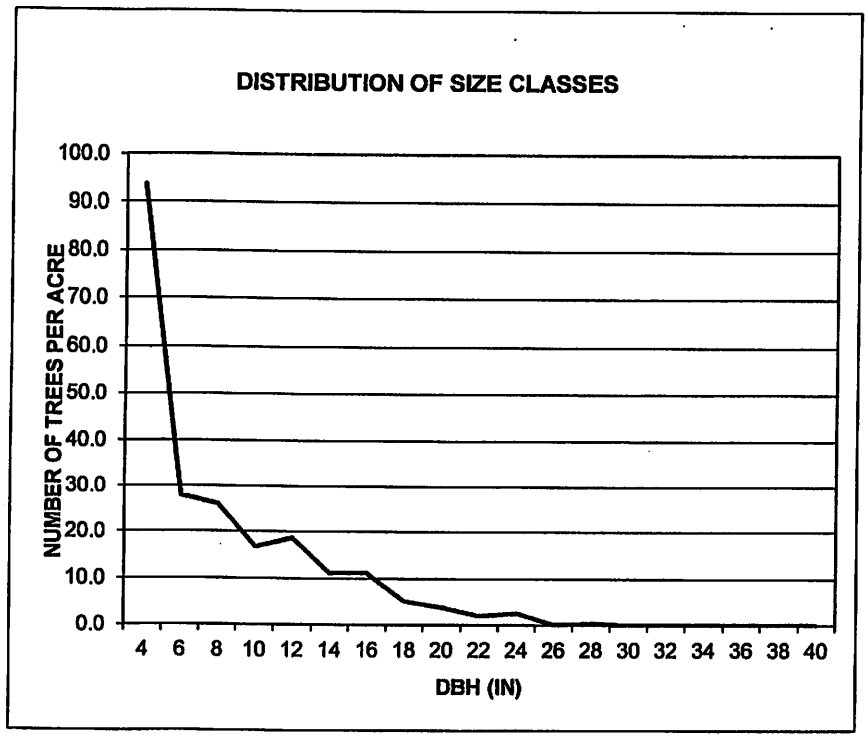
OWNER: Jeff & Penny Tope
TRACT: Stand 1
ACRES: 21.03

DATE: 5/23/2023
FORESTER: Dean A. Berry

This inventory was accomplished using a wedge prism or angle gauge with a basal area factor of **10** over **11** sample points. All figures for volume are in board-feet (bd-ft) Doyle, all figures for basal area (BA) are in feet^2, and all figures for diameter at breast height (dbh) are in inches.

SUMMARY BY SIZE CLASS

DBH	VOL. PER ACRE	TREES PER ACRE	BASAL AREA / ACRE
4		93.8	8.2
6		27.8	5.5
8		26.0	9.1
10		16.7	9.1
12	345	18.5	14.5
14	425	11.1	11.8
16	876	11.1	15.5
18	663	5.1	9.1
20	690	3.8	8.2
22	564	2.1	5.5
24	653	2.6	8.2
26	66	0.2	0.9
28	209	0.4	1.8
30			
32			
34			
36			
38			
40			
TOTAL	4491	219.1	107.3



SUMMARY BY SPECIES

SPECIES	VOL. PER ACRE	PCT. OF PER ACRE VOL.	TREES PER ACRE	PCT. OF PER ACRE TREES	BASAL AREA/ ACRE	PCT. OF PER ACRE BA	AVG. DBH	TOTAL STAND VOLUME
Pop	108	2.4%	1.3	0.6%	1.8	1.7%	16.0	2,273
R Oak	1957	43.6%	21.5	9.8%	30.0	28.0%	16.0	41,164
W Oak	1740	38.7%	60.2	27.5%	40.0	37.3%	11.0	36,587
Hickory	172	3.8%	7.0	3.2%	5.5	5.1%	11.9	3,619
H Maple	203	4.5%	71.4	32.6%	14.5	13.6%	6.1	4,270
R Maple			29.2	13.3%	6.4	5.9%	6.3	-
Beech	169	3.8%	1.1	0.5%	2.7	2.5%	21.1	3,549
Cherry	66	1.5%	12.1	5.5%	2.7	2.5%	6.4	1,395
Walnut								-
Misc	76	1.7%	15.3	7.0%	3.6	3.4%	6.6	1,588
PER ACRE TOTALS	4491	100.0%	219.1	100.0%	107.3	100.0%	9.5	**94,446**

SUMMARY OF VINES	#VALUE!	vines per acre

Misc. Species - Aspen, Yellow Buckeye
Red Oak spp. - Red Oak, Black Oak, Scarlet Oak
White Oak spp. - White Oak, Chestnut Oak
Invasive Species - scattered barberry, privet, J. stiltgrass, grapevines
Repro <4" dbh - hickory, beech, maples and limited oak spp.

OWNER: Jeff & Penny Tope
TRACT: Stand 1
ACRES: 21.03

DATE: 5/23/2023
FORESTER: Dean A. Berry

SUMMARY OF VOLUME PER ACRE BY SPECIES AND SIZE CLASS

DBH	*** SPECIES LISTING ***										VOL. PER ACRE
	Pop	R Oak	W Oak	Hickory	H Maple	R Maple	Beech	Cherry	Walnut	Misc	
12		93	206		46						345
14		82	211	41	26			66			425
16	108	216	383	47	47					76	876
18		119	375	84	84						663
20		352	169				169				690
22		462	102								564
24		424	229								653
26			66								66
28		209									209
30											
32											
34											
36											
38											
40											
VOL./ACRE	108	1957	1740	172	203		169	66		76	4491

Woodland Stand Description and Management Recommendations

Stand # 2 - 22.15 acres

Dominant Species: Sugar Maple, Yellow Poplar, Red Maple, Red Oak Spp., White Oak, Am. Beech, Hickory spp., Aspen, Elm, Spice Bush, Yellow Buckeye

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: All size classes

Stocking Level: Fully stocked (72%) **Basal Area:** 85 **(ft2/acre)** 4"& > dbh

Trees per acre: 138_ 4" & > dbh trees

Diameter Distribution by Species: See attached Stand Summary.

Stand History: Unknown

Topography: Gently sloping ridgetop and side slope areas of different slope aspect

Site Index Value and Species: See in Plan Addendum – BrD, BkF, GuC, WmD, WhE
Tuliptree & Red Oak Site Indexes

Stand Age Estimation: 55-65 yrs.

Average Canopy Height: 60 -65' on small sawtimber trees

Invasive plants or insects impacting this stand: Barberry, Bush Honeysuckle, Privet, Japanese Stiltgrass(trails) are scattered in locations, numerous grapevines found in entire area (some beneficial to wildlife).

Level of invasive plants in the stand: Grapevines – high to very high in about 3/4 of the total area, invasive shrubs just scattered plants throughout the area.

Client Objectives: Develop this area into a maturing sugar maple stand for future timber products. Reduce the grapevines in the area to help protect the trees.

Stand Description: This area is a combination of a low ridgetop area and the side slopes around the ridge. As expected, the ridgetop area has a higher composition of oak, hickory & beech trees, whereas the slopes are a mixture of maples, oaks and beeches with poplars near the lower slope drainages. Grapevines are an issues in the entire area and the slope portions of the stand have a spice bush understory that is eliminating any potential oak regeneration. The reproduction growing in those areas are shade tolerant maples and beech seedlings/saplings.

Past management activities completed in this stand: property lines located but need painted, some grapevines cut, trails maintained.

Management Recommendations:	*EQIP Practice Code:*	*EQIP Practice Name:*
Continue to locate and mark property lines with paint/signage to deter trespass.		
Maintain grass cover on the access trails to reduce erosion potential, grade rutting & install water bars. Work on reducing the Japanese Stiltgrass infestations.	315	Herbaceous Weed Control
Work on reducing the impact of invasive shrubs in this area. Cut grapevines from all "crop" trees (oaks, cherry, poplar).	314	Brush Management

Is a timber harvest recommended? No Landowner may remove some damaged maples at some point if the opportunity/market conditions are favorable.

Comments: This is a very diverse area. Several hunting platforms and feeders are located in this area. Some crown damage from the 2010 tornado was still evident in the larger sawlog trees.

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods
Desired Stand Structure: Uneven Aged

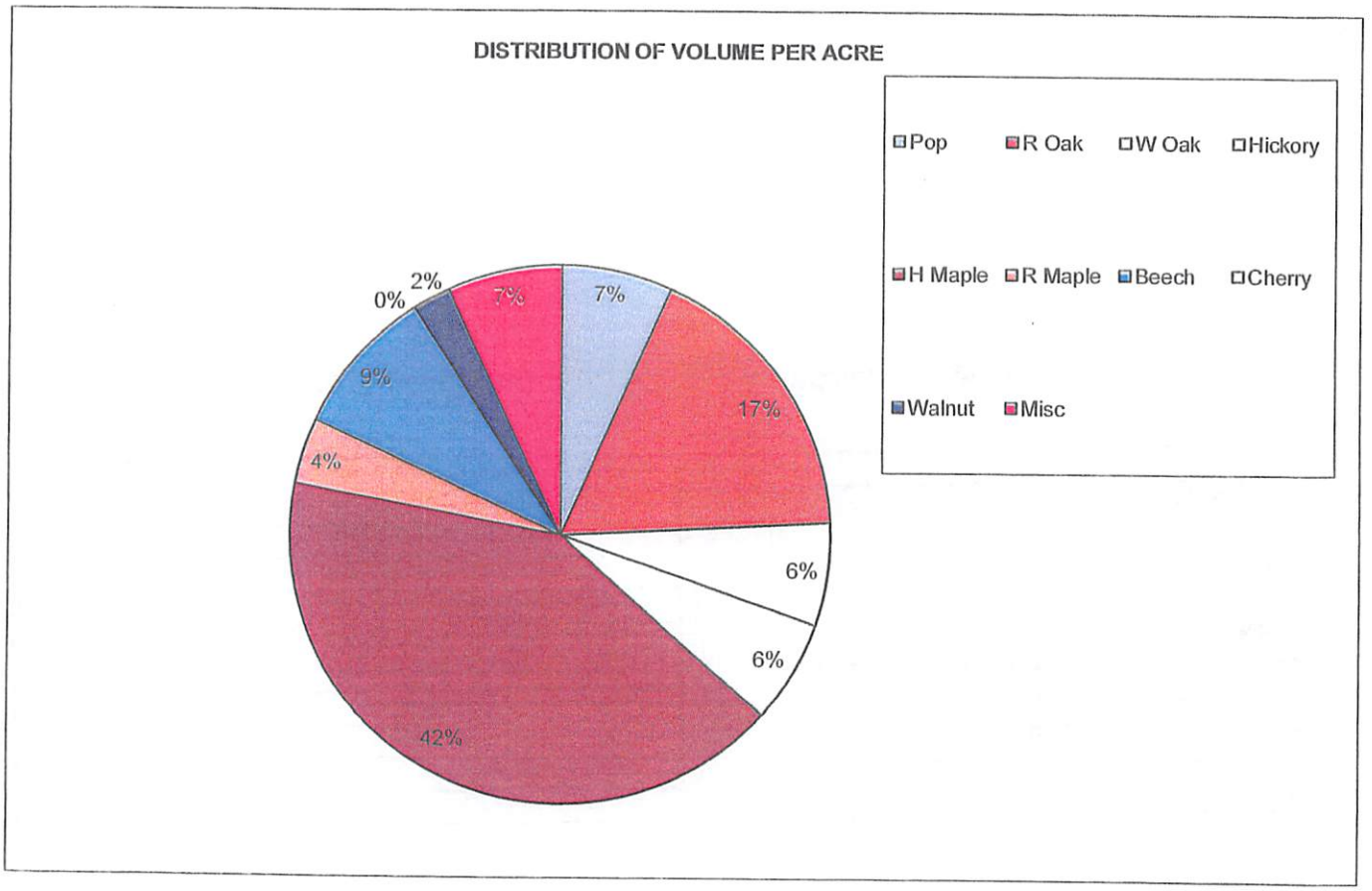
Descriptions of Alternatives and Preferred Alternative to meet desired future conditions: (Include potential impacts to resource concerns for preferred alternative)

1. Landowner does nothing and allows area to continue to develop naturally. Populations of barberry, autumn olive, stiltgrass and privet will increase. Grapevines will continue to restrict canopy development of future crop trees.
   Not a preferred (or recommended) option.

2. Landowner cuts/treats with approved herbicides any non-native invasive shrubs identified in this area and cuts grapevines from all "crop" trees (per USDA 314 Brush Management specifications). Landowner treats any Japanese Stiltgrass that has become established in this area (per USDA 315 Herbaceous Weed Treatment specifications). Chemical usage in areas adjacent to the stream drainages will be monitored to protect water quality.
   Preferred Alternative

CPA-106 Stewardship Plan Forest Inventory (2023)

1. Landowner's name:	Jeff & Penny Tope
2. Name, number, or location of the tract:	Stand 2
3. Acreage of the tract (*A*):	22.15
4. Date of the inventory:	5/31/2023
5. Forester's name:	Dean A. Berry
6. Prism or angle gauge basal area factor (*BAF* or *F*):	10.0
7. Number of sample points (*n*):	11
8. Length of log (12 ft. or 16 ft.):	16
9. Plot size for vines (Ex. 1/20 Acre=0.05):	N/A
10. Type of inventory:	Variable plot size


DISTRIBUTION OF VOLUME PER ACRE
Pop
R Oak
W Oak
Hickory
H Maple
R Maple
Beech
Cherry
Walnut
Misc
7%
17%
6%
6%
42%
4%
9%
0%
2%
7%

CPA-106 Stewardship Plan Forest Inventory (2023)
SUMMING ALL TREES

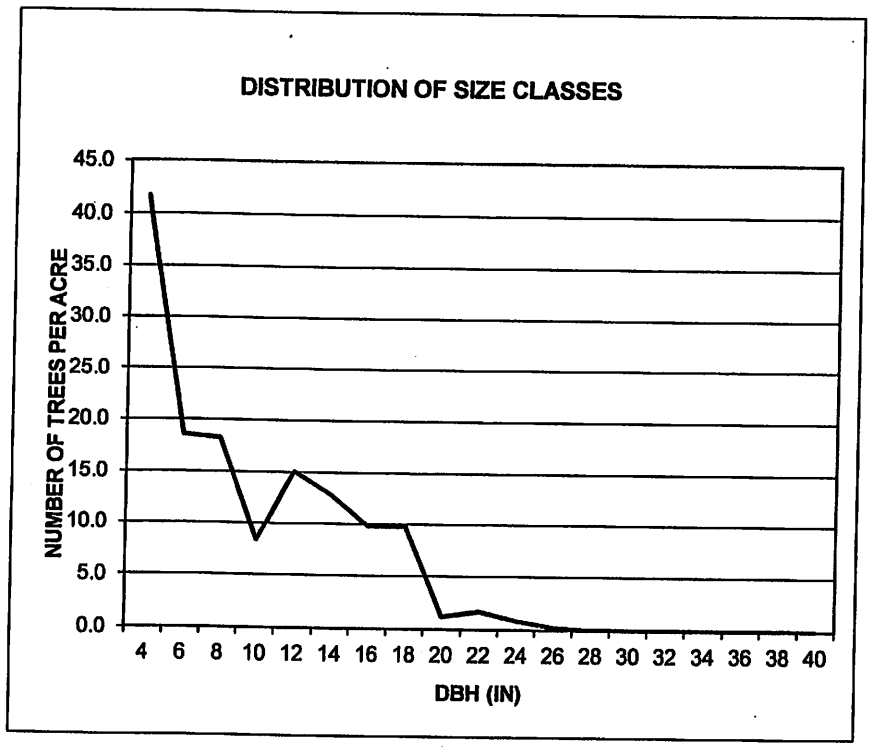
OWNER: Jeff & Penny Tope
TRACT: Stand 2
ACRES: 22.15

DATE: 5/31/2023
FORESTER: Dean A. Berry

This inventory was accomplished using a wedge prism or angle gauge with a basal area factor of **10** over **11** sample points. All figures for volume are in board-feet (bd-ft) Doyle, all figures for basal area (BA) are in feet^2, and all figures for diameter at breast height (dbh) are in inches.

SUMMARY BY SIZE CLASS

DBH	VOL. PER ACRE	TREES PER ACRE	BASAL AREA / ACRE
4		41.7	3.6
6		18.5	3.6
8		18.2	6.4
10		8.3	4.5
12	299	15.0	11.8
14	607	12.8	13.6
16	775	9.8	13.6
18	1274	9.8	17.3
20	206	1.3	2.7
22	424	1.7	4.5
24	252	0.9	2.7
26	89	0.2	0.9
28			
30			
32			
34			
36			
38			
40			
TOTAL	3926	138.2	85.5



SUMMARY BY SPECIES

SPECIES	VOL. PER ACRE	PCT. OF PER ACRE VOL.	TREES PER ACRE	PCT. OF PER ACRE TREES	BASAL AREA/ ACRE	PCT. OF PER ACRE BA	AVG. DBH	TOTAL STAND VOLUME
Pop	261	6.7%	14.1	10.2%	9.1	10.6%	10.9	5,784
R Oak	687	17.5%	12.4	9.0%	10.9	12.8%	12.7	15,220
W Oak	239	6.1%	2.6	1.9%	3.6	4.3%	16.0	5,293
Hickory	243	6.2%	4.4	3.2%	4.5	5.3%	13.8	5,390
H Maple	1632	41.6%	77.2	55.9%	40.0	46.8%	9.7	36,155
R Maple	154	3.9%	20.3	14.7%	6.4	7.4%	7.6	3,420
Beech	349	8.9%	2.3	1.7%	4.5	5.3%	18.9	7,736
Cherry								-
Walnut	91	2.3%	1.7	1.2%	1.8	2.1%	14.1	2,017
Misc	269	6.8%	3.1	2.3%	4.5	5.3%	16.4	5,948
PER ACRE TOTALS	3926	100.0%	138.2	100.0%	85.5	100.0%	10.6	**86,962**

SUMMARY OF VINES	#VALUE!	vines per acre

Misc. Species - Aspen, Elm
Red Oak Spp. - Red Oak, Black Oak, Scarlet Oak
Repro <4" dbh - maples, beech, yellow buckeye, hickories,spice bush
Invasive Species - barberry, privet, J. stiltgrass, grapevines

OWNER: Jeff & Penny Tope
TRACT: Stand 2
ACRES: 22.15

DATE: 5/31/2023
FORESTER: Dean A. Berry

SUMMARY OF VOLUME PER ACRE BY SPECIES AND SIZE CLASS

DBH	*** SPECIES LISTING ***										VOL. PER ACRE
	Pop	R Oak	W Oak	Hickory	H Maple	R Maple	Beech	Cherry	Walnut	Misc	
12	80		34	23	93	46			23		299
14	134	26			342					105	607
16	47	122	47		357	108	47			47	775
18		220	51	220	595		119		68		1274
20		56					94			56	206
22		263			102					60	424
24			107		145						252
26							89				89
28											
30											
32											
34											
36											
38											
40											
VOL./ACRE	261	687	239	243	1632	154	349		91	269	3926

Woodland Stand Description and Management Recommendations

Stand # 3 - **21.70** acres total (2 separate pieces)

Dominant Species: Sugar Maple, Yellow Poplar, Am. Beech, Red Maple, Red Oak Spp., White Oak, Hickory spp., Sycamore, Elm, Black Gum, Spice Bush, Paw Paw

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Small/Medium sawtimber predominately.

Stocking Level: Fully stocked (73%) **Basal Area:** 82 **(ft2/acre)** 4"& > dbh

Trees per acre: 182_ 4"& > dbh trees

Diameter Distribution by Species: See attached Stand Summary.

Stand History: Harvesting - "Select cut" timber salvage after the 2010 tornado damage event.

Topography: Gently sloping drainage areas (2 separate drainages)

Site Index Value and Species: See in Plan Addendum – New1AF, BrD, WmD, WhE
Tuliptree & Red Oak Site Indexes

Stand Age Estimation: 45-50 yrs. with older larger diameter trees scattered in stand.

Average Canopy Height: 50 -60' on small sawtimber trees

Invasive plants or insects impacting this stand: Barberry, Privet, Japanese Stiltgrass(trails) are scattered in locations, grapevines found in entire area.

Level of invasive plants in the stand: Grapevines – high in about 3/4 of the total area (few in area near Plots 40 & 45), invasive shrubs just scattered plants throughout the area, in canopy openings and near trails.

Client Objectives: Develop this area into a diverse hardwood stand for future timber products. Reduce the grapevines in the area to help protect the trees.

Stand Description: This area covers the 2 lower slope, hollow areas associated with the 2 intermittent stream drainages. The northern portion of this area is younger, old field reversing with most trees along the stream banks. The main drainage in the center of this ownership is fully developed with larger diameter trees shading the stream channel. Grapevines are an issues in the entire area and the majority of the main stand has a thick spice bush/paw paw understory that is eliminating any potential oak regeneration. The reproduction growing in those areas are the more shade tolerant maples, poplars, and beech saplings.

Past management activities completed in this stand: property lines located but need painted, some grapevines cut, trails maintained.

Management Recommendations:	*EQIP Practice Code:*	*EQIP Practice Name:*
Continue to locate and mark property lines with paint/signage to deter trespass.		
Maintain grass cover on the access trails to reduce erosion potential. Work on reducing the Japanese Stiltgrass infestations.	315	Herbaceous Weed Control
Work on reducing the impact of invasive shrubs in this area (scattered barberry & privet). Cut grapevines from all "crop" trees (oaks, sugar maples, poplar & walnut).	314	Brush Management

Is a timber harvest recommended? No Only dead trees will be utilized for firewood.

Comments: Crown damage from the 2010 tornado was still evident in the larger trees, especially in the northern portions of this stand. Garlic Mustard noted in this area that could be treated/pulled.

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods
Desired Stand Structure: Uneven Aged

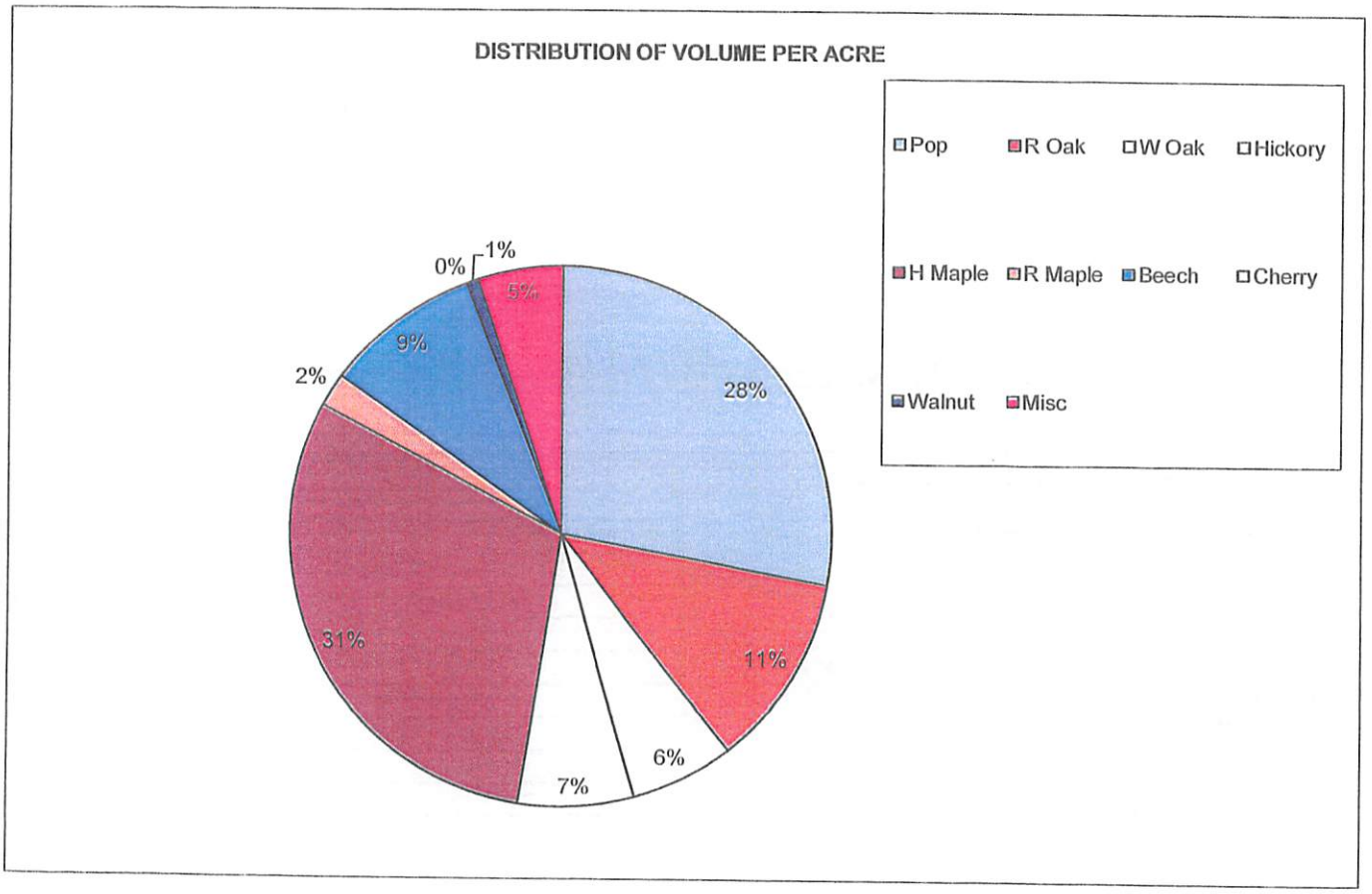
Descriptions of Alternatives and Preferred Alternative to meet desired future conditions: (Include potential impacts to resource concerns for preferred alternative)

1. Landowner does nothing and allows area to continue to develop naturally.
   The populations of barberry, privet, stiltgrass and honeysuckle will increase. Grapevines will continue to restrict canopy development of future crop trees.
   Not a preferred (or recommended) option.

2. Landowner cuts/treats with approved herbicides any non-native invasive shrubs identified in this area and cuts grapevines from all "crop" trees (per USDA 314 Brush Management specifications). Landowner treats any Japanese Stiltgrass that has become established in this area (per USDA 315 Herbaceous Weed Treatment specifications). Chemical usage in areas adjacent to the stream drainages will be monitored to protect water quality.
   Preferred Alternative

CPA-106 Stewardship Plan Forest Inventory (2023)

1. Landowner's name:	Jeff & Penny Tope
2. Name, number, or location of the tract:	Stand 3
3. Acreage of the tract (*A*):	21.70
4. Date of the inventory:	6/5/2023
5. Forester's name:	Dean A. Berry
6. Prism or angle gauge basal area factor (*BAF* or *F*):	10.0
7. Number of sample points (*n*):	11
8. Length of log (12 ft. or 16 ft.):	16
9. Plot size for vines (Ex. 1/20 Acre=0.05):	N/A
10. Type of inventory:	Variable plot size


DISTRIBUTION OF VOLUME PER ACRE
Pop
R Oak
W Oak
Hickory
H Maple
R Maple
Beech
Cherry
Walnut
Misc
28%
11%
6%
7%
31%
2%
9%
0%
1%
5%

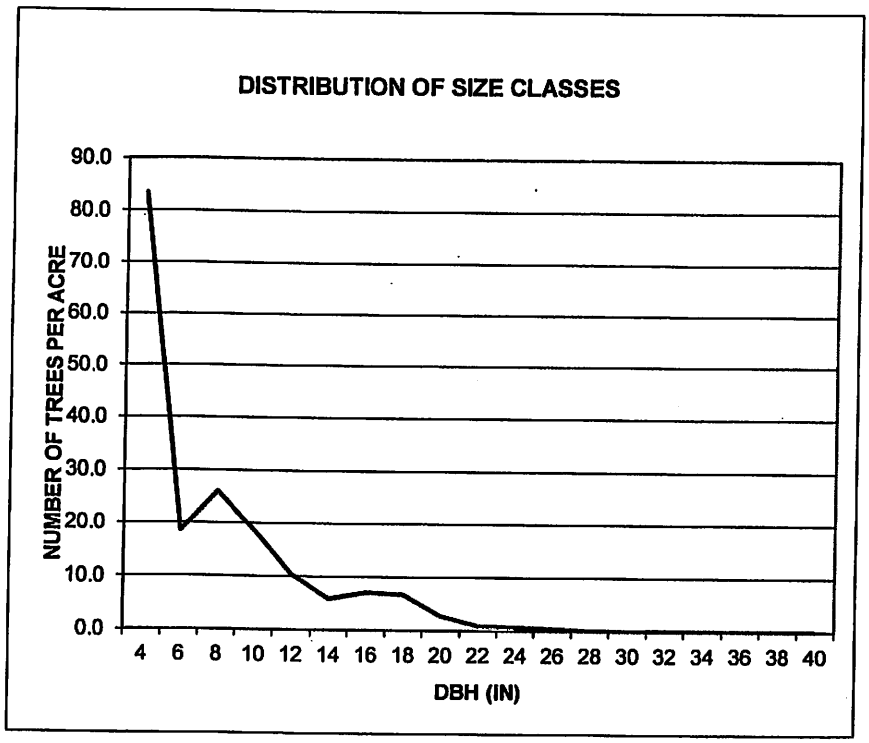
CPA-106 Stewardship Plan Forest Inventory (2023)
SUMMING ALL TREES

OWNER: Jeff & Penny Tope
TRACT: Stand 3
ACRES: 21.70

DATE: 6/5/2023
FORESTER: Dean A. Berry

This inventory was accomplished using a wedge prism or angle gauge with a basal area factor of **10** over **11** sample points. All figures for volume are in board-feet (bd-ft) Doyle, all figures for basal area (BA) are in feet^2, and all figures for diameter at breast height (dbh) are in inches.

SUMMARY BY SIZE CLASS			
DBH	VOL. PER ACRE	TREES PER ACRE	BASAL AREA / ACRE
4		83.3	7.3
6		18.5	3.6
8		26.0	9.1
10		18.3	10.0
12	185	10.4	8.2
14	310	6.0	6.4
16	595	7.2	10.0
18	913	6.7	11.8
20	431	2.9	6.4
22	94	1.0	2.7
24	339	0.9	2.7
26	179	0.5	1.8
28	40	0.2	0.9
30			
32	72	0.2	0.9
34			
36			
38			
40			
TOTAL	3159	182.1	81.8



SUMMARY BY SPECIES

SPECIES	VOL. PER ACRE	PCT. OF PER ACRE VOL.	TREES PER ACRE	PCT. OF PER ACRE TREES	BASAL AREA/ ACRE	PCT. OF PER ACRE BA	AVG. DBH	TOTAL STAND VOLUME
Pop	880	27.9%	15.5	8.5%	15.5	18.9%	13.5	19,099
R Oak	360	11.4%	1.2	0.7%	3.6	4.4%	23.4	7,811
W Oak	197	6.2%	1.7	0.9%	2.7	3.3%	17.3	4,275
Hickory	219	6.9%	2.9	1.6%	4.5	5.6%	17.0	4,751
H Maple	961	30.4%	132.2	72.6%	36.4	44.4%	7.1	20,861
R Maple	64	2.0%	2.0	1.1%	1.8	2.2%	12.9	1,388
Beech	295	9.3%	10.2	5.6%	8.2	10.0%	12.1	6,408
Cherry								-
Walnut	23	0.7%	1.2	0.6%	0.9	1.1%	12.0	502
Misc	159	5.0%	15.3	8.4%	8.2	10.0%	9.9	3,445
PER ACRE TOTALS	3159	100.0%	182.1	100.0%	81.8	100.0%	9.1	**68,541**

SUMMARY OF VINES	#VALUE!	vines per acre

Misc. Species - Elm, Black Gum, Sycamore
Invasive Species - Privet, barberry, autumn olive, J. stiltgrass, multi flora rose
Repro <4" dbh - Spice bush, paw paw, maple saplings

OWNER: Jeff & Penny Tope
TRACT: Stand 3
ACRES: 21.70

DATE: 6/5/2023
FORESTER: Dean A. Berry

SUMMARY OF VOLUME PER ACRE BY SPECIES AND SIZE CLASS

DBH	*** SPECIES LISTING ***										VOL. PER ACRE
	Pop	R Oak	W Oak	Hickory	H Maple	R Maple	Beech	Cherry	Walnut	Misc	
12	23				46	23	23		23	46	185
14	94			53	82	41	41				310
16	137		61	47	257		47			47	595
18	334	68	136	119	255						913
20					281		150				431
22	60						34				94
24	232	107									339
26		113								66	179
28					40						40
30											
32		72									72
34											
36											
38											
40											
VOL./ACRE	880	360	197	219	961	64	295		23	159	3159

Woodland Stand Description and Management Recommendations

Stand # 4 - 15.84 acres

Dominant Species: White Oak, Red Oak spp., Yellow Poplar, Sugar Maple, Red Maple, Hickory spp., Am. Beech, Black Cherry, Black Gum, Honey Locust, Yellow Buckeye, Sassafras, Dogwood, Ash, Alder

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: All size classes

Stocking Level: Fully stocked barely (near "B" level) **Basal Area:** 70 **(ft2/acre)** 4"& > dbh

Trees per acre: 167_ 4" & > dbh trees. Varies greatly depending on the location in stand & amount of tornado damage received.

Diameter Distribution by Species: See attached Stand Summary.

Stand History: Unknown 2010 salvage harvest of area after tornado damage, eastern end of this area (hilltop) is old field reversion.

Topography: Gently sloping hilltop, south facing slope and a small hollow

Site Index Value and Species: See in Plan Addendum – DtE, GsC, RcD, WhE
Tuliptree & Red Oak Site Indexes

Stand Age Estimation: 15-30 yrs. with scattered older sawtimber sized trees.

Average Canopy Height: 30 -60' – very irregular depending on number of residual trees present in an area.

Invasive plants or insects impacting this stand: Privet, Autumn Olive, Bush Honeysuckle, Japanese Stiltgrass are the major issues, scattered grapevines (some beneficial to wildlife) and a few Barberry noted.

Level of invasive plants in the stand: Medium to high in about ½ of the total area.

Client Objectives: Allow this area to recover from the tornado and mature into forestland again.

Stand Description: This area was separated out from the adjacent woods because of the amount of damage it received by a tornado in the summer of 2010. This entire area was then salvage harvested and then just left to grow. Trees with damaged crowns and stem damage are still part of the residual stand composition. Pockets of sapling/pole trees only in this area. The eastern end of this area (Plot 23) is old field reversion area. A waterline easement was constructed along the entire length of the northern property line. Numerous access trails lead to this line. This area has the highest population of non-native invasive species found on the farm.

Past management activities completed in this stand: property lines located, some grapevines cut, trails constructed and maintained.

Management Recommendations:	*EQIP Practice Code:*	*EQIP Practice Name:*
Continue to locate and mark property lines with paint/signage to deter trespass.		
Maintain grass cover on the access trails to reduce erosion potential, grade rutting & install water bars. Work on reducing the Japanese Stiltgrass infestations.	315	Herbaceous Weed Control
Work on reducing the impact of invasive shrubs in this area. Cut grapevines from all "crop" trees (oaks, cherry, poplar).	314	Brush Management

Is a timber harvest recommended? No Landowner may remove some dead trees for firewood if easily accessible.

Comments: This is recovering from being almost totally wiped out in 2010. In 2012 I could not wallow through this area, now with some crown closure the understory is more open.

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods
Desired Stand Structure: Uneven Aged

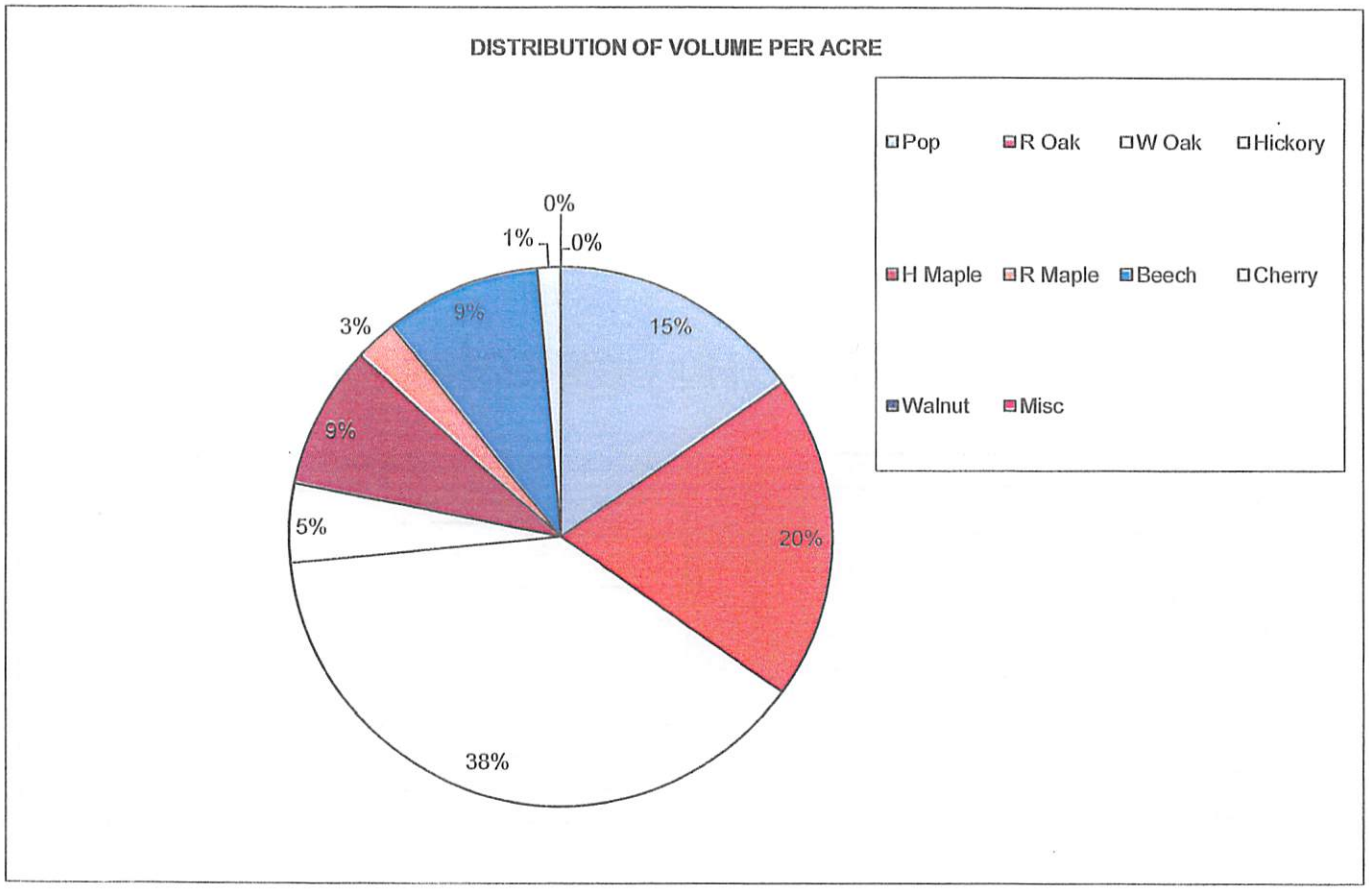
Descriptions of Alternatives and Preferred Alternative to meet desired future conditions: (Include potential impacts to resource concerns for preferred alternative)

1. Landowner does nothing and allows area to continue to develop naturally. Populations of privet, autumn olive, bush honeysuckle, stiltgrass and barberry will increase.
   Not a preferred (or recommended) option.

2. Landowner cuts/treats with approved herbicides any non-native invasive shrubs identified in this area and cuts grapevines from all "crop" trees (per USDA 314 Brush Management specifications). Landowner treats any Japanese Stiltgrass that becomes established in this area (per USDA 315 Herbaceous Weed Treatment specifications). **Preferred Alternative**

CPA-106 Stewardship Plan Forest Inventory (2023)

1. Landowner's name:	Jeff & Penny Tope
2. Name, number, or location of the tract:	Stand 4
3. Acreage of the tract (*A*):	15.84
4. Date of the inventory:	5/24/2023
5. Forester's name:	Dean A. Berry
6. Prism or angle gauge basal area factor (*BAF* or *F*):	10.0
7. Number of sample points (*n*):	8
8. Length of log (12 ft. or 16 ft.):	16
9. Plot size for vines (Ex. 1/20 Acre=0.05):	N/A
10. Type of inventory:	Variable plot size


DISTRIBUTION OF VOLUME PER ACRE
Pop
R Oak
W Oak
Hickory
H Maple
R Maple
Beech
Cherry
Walnut
Misc
0%
0%
1%
9%
3%
15%
9%
20%
5%
38%

CPA-106 Stewardship Plan Forest Inventory (2023)
SUMMING ALL TREES

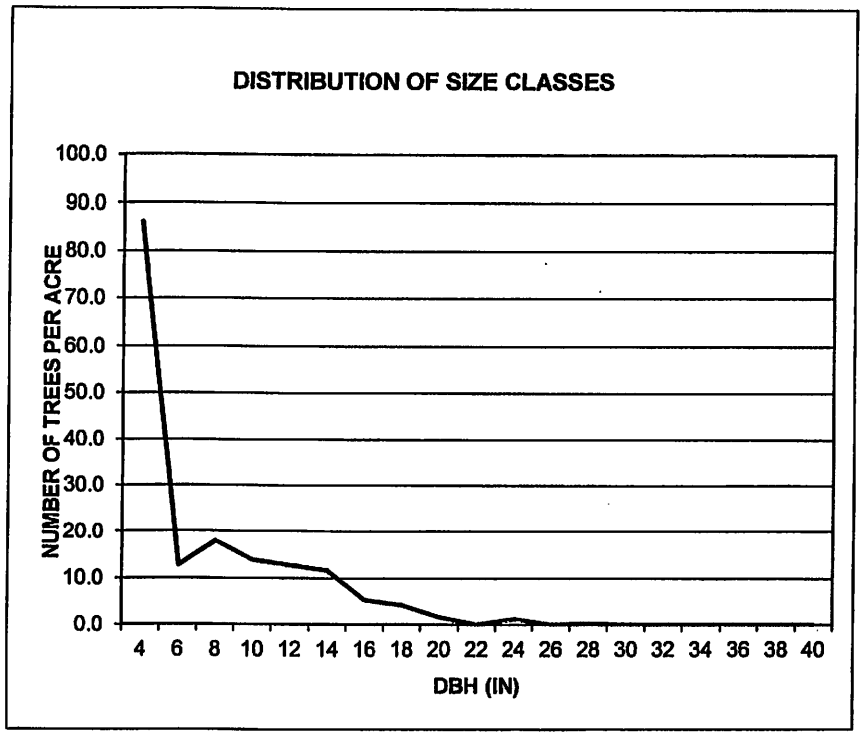
OWNER: Jeff & Penny Tope
TRACT: Stand 4
ACRES: 15.84

DATE: 5/24/2023
FORESTER: Dean A. Berry

This inventory was accomplished using a wedge prism or angle gauge with a basal area factor of **10** over **8** sample points. All figures for volume are in board-feet (bd-ft) Doyle, all figures for basal area (BA) are in feet^2, and all figures for diameter at breast height (dbh) are in inches.

SUMMARY BY SIZE CLASS

DBH	VOL. PER ACRE	TREES PER ACRE	BASAL AREA / ACRE
4		85.9	7.5
6		12.7	2.5
8		17.9	6.3
10		13.8	7.5
12	173	12.7	10.0
14	568	11.7	12.5
16	446	5.4	7.5
18	583	4.2	7.5
20	356	1.7	3.8
22			
24	233	1.2	3.8
26			
28	161	0.3	1.3
30			
32			
34			
36			
38			
40			
TOTAL	2521	167.6	70.0



SUMMARY BY SPECIES

SPECIES	VOL. PER ACRE	PCT. OF PER ACRE VOL.	TREES PER ACRE	PCT. OF PER ACRE TREES	BASAL AREA/ ACRE	PCT. OF PER ACRE BA	AVG. DBH	TOTAL STAND VOLUME
Pop	383	15.2%	2.0	1.2%	3.8	5.4%	18.4	6,069
R Oak	495	19.6%	4.9	3.0%	7.5	10.7%	16.7	7,835
W Oak	971	38.5%	10.9	6.5%	15.0	21.4%	15.9	15,381
Hickory	123	4.9%	10.1	6.0%	7.5	10.7%	11.7	1,949
H Maple	217	8.6%	39.2	23.4%	13.8	19.6%	8.0	3,431
R Maple	64	2.5%	37.0	22.1%	7.5	10.7%	6.1	1,008
Beech	233	9.3%	5.4	3.2%	5.0	7.1%	13.1	3,698
Cherry	35	1.4%	4.8	2.8%	2.5	3.6%	9.8	556
Walnut								-
Misc			53.2	31.8%	7.5	10.7%	5.1	-
PER ACRE TOTALS	2521	100.0%	167.6	100.0%	70.0	100.0%	8.8	**39,926**

SUMMARY OF VINES	#VALUE!	vines per acre

Misc. Species - Yellow Buckeye, H Locust, Black Gum, Ash
Invasive Species - Barberry, Privet, Bush Honeysuckle, J. Stiltgrass
Repro <4" dbh - Yellow Poplar, Red Maple, Beech, Yellow Buckeye, Sugar Maple, Sassafras, Ash, Dogwood, Hickory, Alder
Grapevines heaviest in upper slope area - Plots 19 & 20

OWNER: Jeff & Penny Tope
TRACT: Stand 4
ACRES: 15.84

DATE: 5/24/2023
FORESTER: Dean A. Berry

SUMMARY OF VOLUME PER ACRE BY SPECIES AND SIZE CLASS

DBH	*** SPECIES LISTING ***										VOL. PER ACRE
	Pop	R Oak	W Oak	Hickory	H Maple	R Maple	Beech	Cherry	Walnut	Misc	
12				32	32	64	46				173
14	72	56	129	91	185			35			568
16		149	213				84				446
18		187	396								583
20	150	103					103				356
22											
24			233								233
26											
28	161										161
30											
32											
34											
36											
38											
40											
VOL./ACRE	383	495	971	123	217	64	233	35			2521

Woodland Stand Description and Management Recommendations

Stand #5 - **23.08** acres

Dominant Species: Red Oak, Black Oak, Scarlet Oak, White Oak, Chestnut Oak, Hickory spp., Am. Beech, Sugar Maple, Red Maple, Dogwood, Blackhaw

Forest Type or Dominant Vegetation: Oak-Hickory

Stand Diameter or Size Class: All size classes

Stocking Level: Fully stocked **Basal Area:** 94 **(ft2/acre)** 4" & > dbh

Trees per acre: 132_4"& > dbh

Diameter Distribution by Species: See attached Stand Summary.

Stand History: Harvesting - "Select cut" Part of area after 2010 tornado.

Topography: Gently sloping low ridgetop and west facing, fairly steep, side slope area.

Site Index Value and Species: See in Plan Addendum – DtE, GsC, WhE, WhD
Tuliptree & Red Oak Site Indexes

Stand Age Estimation: 60-65 yrs. with older beech trees.

Average Canopy Height: lower canopy - 60'-75'

Invasive plants or insects impacting this stand: Autumn Olive, Bush Honeysuckle, Japanese Stiltgrass and Privet all noted, along with scattered grapevines.

Level of invasive plants in the stand: light in most of the stand.

Client Objectives: Maintain area as a closed canopy oak forest.

Stand Description: This predominately oak area is the ridgetop area near the pond and then a west facing hillside running the entire width of the farm. All sizes of trees are present but mainly small/medium sized sawtimber trees. Because this is a closed canopy area with an open under story, the majority of seedling saplings are shade tolerant, maples and beech trees. The lower slope portions of the slope have ferns in the understory.

Past management activities completed in this stand: Property lines located, trails maintained, some invasive control completed, grapevines cut in part of the area.

Management Recommendations:	***EQIP Practice Code:***	***EQIP Practice Name:***
Continue to locate and mark property lines with paint/signage to deter trespass.		

Maintain grass/leaf cover on the trails to reduce erosion potential, grade trails and install water diversions. Work on reducing the amount of Japanese Stiltgrass that is becoming prevalent in the trails.	315	Herbaceous Weed Control
Work on reducing the impact of invasive shrubs in this area. Cut grapevines from all the oak and maple trees.	314	Brush Management

Is a timber harvest recommended? No Not in this 10yr. management period.

Comments: To maintain/increase hard mast production in the area, grapevines should be cut from all oak trees. Leave some grapevines un-cut in the beech trees for wildlife benefit.

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation: As Listed in Dominant Species
Desired Stand Structure: Uneven Aged

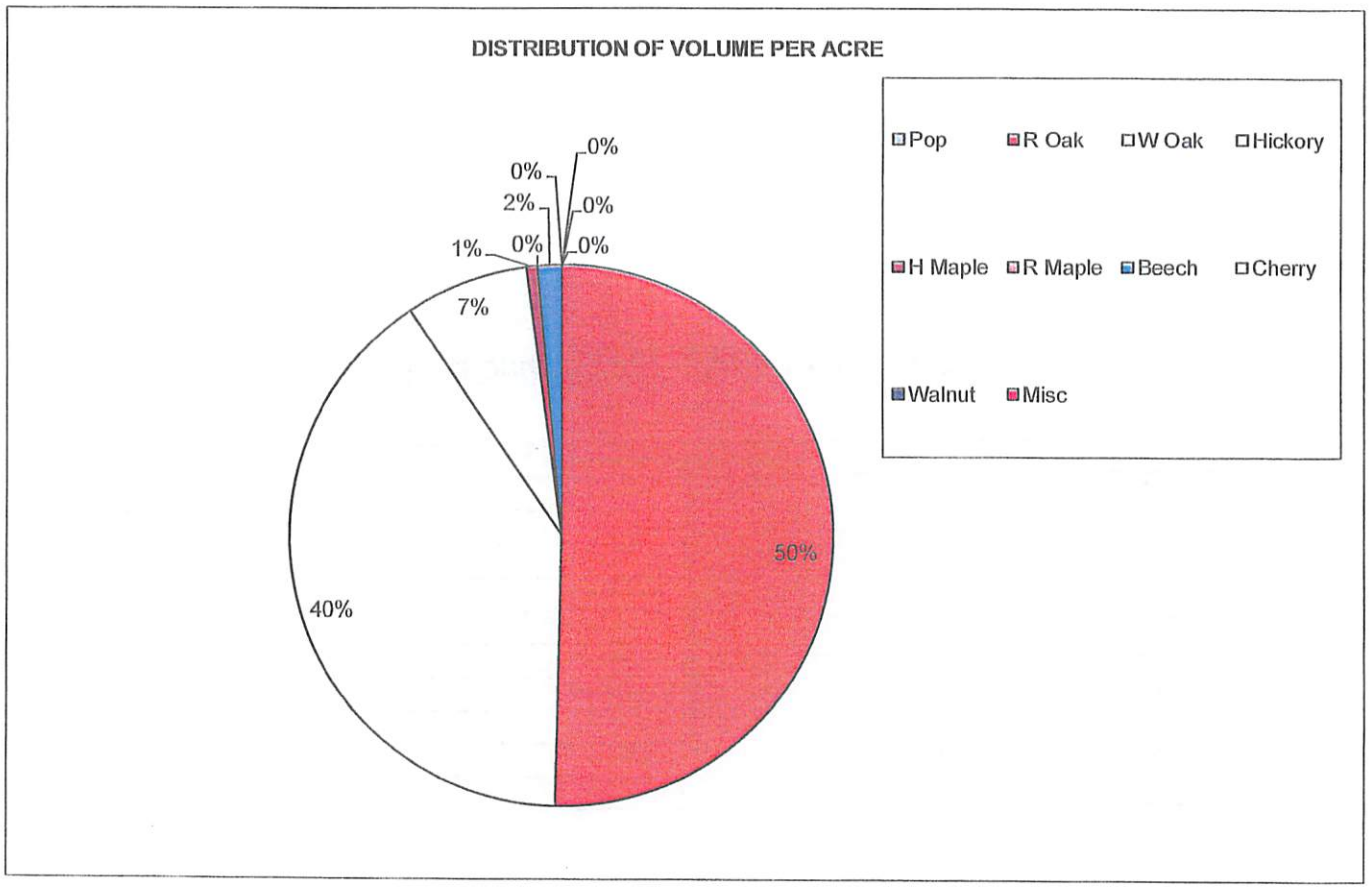
Descriptions of Alternatives and Preferred Alternative to meet desired future conditions:

1. Landowner does nothing and allows area to continue to develop naturally. Populations of autumn olive, honeysuckle and privet will increase. Trails will become overgrown with stiltgrass, invasive shrubs and be impassable.
   Not a preferred (or recommended) option.

2. Landowner cuts/treats with approved herbicides any non-native invasive shrubs identified in this area (per USDA 314 Brush Management specifications). Grapevines will be cut from "crop" trees. Landowner treats the Japanese Stiltgrass that has become established in this area (per USDA 315 Herbaceous Weed Treatment specifications). Trails will be maintained.
   Preferred Alternative

CPA-106 Stewardship Plan Forest Inventory (2023)

1. Landowner's name:	Jeff & Penny Tope
2. Name, number, or location of the tract:	Stand 5
3. Acreage of the tract (*A*):	23.08
4. Date of the inventory:	5/24/2023
5. Forester's name:	Dean A. Berry
6. Prism or angle gauge basal area factor (*BAF* or *F*):	10.0
7. Number of sample points (*n*):	10
8. Length of log (12 ft. or 16 ft.):	16
9. Plot size for vines (Ex. 1/20 Acre=0.05):	N/A
10. Type of inventory:	Variable plot size


DISTRIBUTION OF VOLUME PER ACRE
Pop
R Oak
W Oak
Hickory
H Maple
R Maple
Beech
Cherry
Walnut
Misc
0%
0%
2%
0%
1%
0%
0%
7%
50%
40%

CPA-106 Stewardship Plan Forest Inventory (2023)
SUMMING ALL TREES

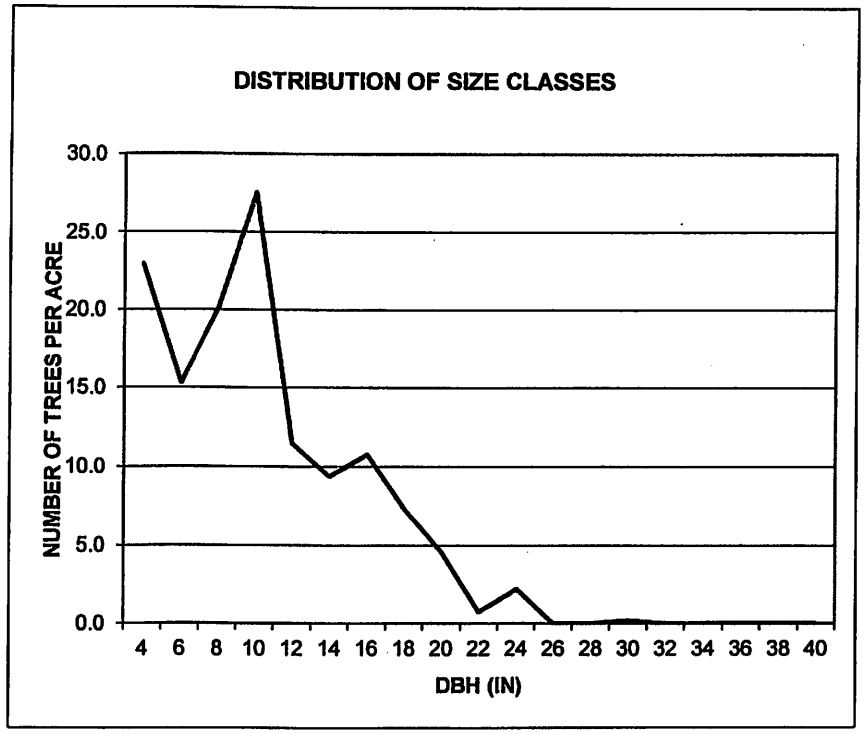
OWNER: Jeff & Penny Tope
TRACT: Stand 5
ACRES: 23.08

DATE: 5/24/2023
FORESTER: Dean A. Berry

This inventory was accomplished using a wedge prism or angle gauge with a basal area factor of **10** over **10** sample points. All figures for volume are in board-feet (bd-ft) Doyle, all figures for basal area (BA) are in feet^2, and all figures for diameter at breast height (dbh) are in inches.

SUMMARY BY SIZE CLASS

DBH	VOL. PER ACRE	TREES PER ACRE	BASAL AREA / ACRE
4		22.9	2.0
6		15.3	3.0
8		20.1	7.0
10		27.5	15.0
12	241	11.5	9.0
14	445	9.4	10.0
16	884	10.7	15.0
18	944	7.4	13.0
20	862	4.6	10.0
22	224	0.8	2.0
24	767	2.2	7.0
26			
28			
30		0.2	1.0
32			
34			
36			
38			
40			
TOTAL	4365	132.4	94.0



SUMMARY BY SPECIES

SPECIES	VOL. PER ACRE	PCT. OF PER ACRE VOL.	TREES PER ACRE	PCT. OF PER ACRE TREES	BASAL AREA/ ACRE	PCT. OF PER ACRE BA	AVG. DBH	TOTAL STAND VOLUME
Pop								-
R Oak	2197	50.3%	24.1	18.2%	32.0	34.0%	15.6	50,711
W Oak	1757	40.3%	46.7	35.3%	35.0	37.2%	11.7	40,562
Hickory	321	7.3%	12.0	9.1%	9.0	9.6%	11.7	7,400
H Maple	28	0.6%	27.3	20.6%	9.0	9.6%	7.8	648
R Maple			18.6	14.0%	5.0	5.3%	7.0	-
Beech	62	1.4%	3.8	2.8%	4.0	4.3%	13.9	1,434
Cherry								-
Walnut								-
Misc								-
PER ACRE TOTALS	4365	100.0%	132.4	100.0%	94.0	100.0%	11.4	**100,754**

SUMMARY OF VINES	#VALUE!	vines per acre

Red Oak Spp. - Red Oak, Black Oak & Scarlet Oak
White Oak Spp. - White Oak & Chestnut Oak
Repro <4" dbh - Beech, Sugar Maple, Dogwood, Ash, Blackhaw, Red Maple
Invasive Species - barberry, bush honeysuckle, autumn olive, J. stiltgrass
Scattered grapevines found throughout area

OWNER: Jeff & Penny Tope
TRACT: Stand 5
ACRES: 23.08

DATE: 5/24/2023
FORESTER: Dean A. Berry

SUMMARY OF VOLUME PER ACRE BY SPECIES AND SIZE CLASS

DBH	*** SPECIES LISTING ***										VOL. PER ACRE
	Pop	R Oak	W Oak	Hickory	H Maple	R Maple	Beech	Cherry	Walnut	Misc	
12		51	113	51			25				241
14		135	225	58	28						445
16		274	491	119							884
18		552	299	93							944
20		557	268				37				862
22			224								224
24		629	138								767
26											
28											
30											
32											
34											
36											
38											
40											
VOL./ACRE		2197	1757	321	28		62				4365

Woodland Stand Description and Management Recommendations

Stand # 6 - **12.74** acres Non-Forest Stewardship Area – residential (1.0 ac), pond (1 ½ ac), outbuildings, driveway & mowed areas

Dominant Species: N/A

Forest Type or Dominant Vegetation: N/A

Stand Diameter or Size Class: N/A

Stocking Level: **Basal Area:** **(ft2/acre) Trees per acre:**

Diameter Distribution by Species: N/A

Stand History: Other residential use area

Topography: Gently sloping

Site Index Value and Species: N/A **Stand Age Estimation:** N/A

Average Canopy Height: N/A

Invasive plants or insects impacting this stand: Addressed in adjacent stand descriptions.

Level of invasive plants in the stand: N/A

Client Objectives: Maintain as personal residential use area.

Stand Description: This Stand covers the driveway, house, outbuildings, pond area and surrounding mowed area. The area is semi-wooded with a variety of trees and shrubs.

Past management activities completed in this stand: area well maintained.

Management Recommendations:	***EQIP Practice Code:***	***EQIP Practice Name:***
Work on reducing the Japanese Stiltgrass infestation along/in the access driveway area.	315	Herbaceous Weed Control

Is a timber harvest recommended? N/A

Comments: Great secluded setting. Mr. & Mrs. Tope reside here. This area will not qualify for OFTL real estate tax reduction program. Numerous improvements have been made in this area to enhance the recreational use by family and friends, (pond constructed, shelter house).

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation: N/A
Desired Stand Structure: N/A

Descriptions of Alternatives and Preferred Alternative to meet desired future conditions:

1. Landowner does nothing and allows area to become overgrown.
   Populations of Japanese stiltgrass, autumn olive, barberry and privet populate will explode in this area. **Not a preferred (or recommended) option.**

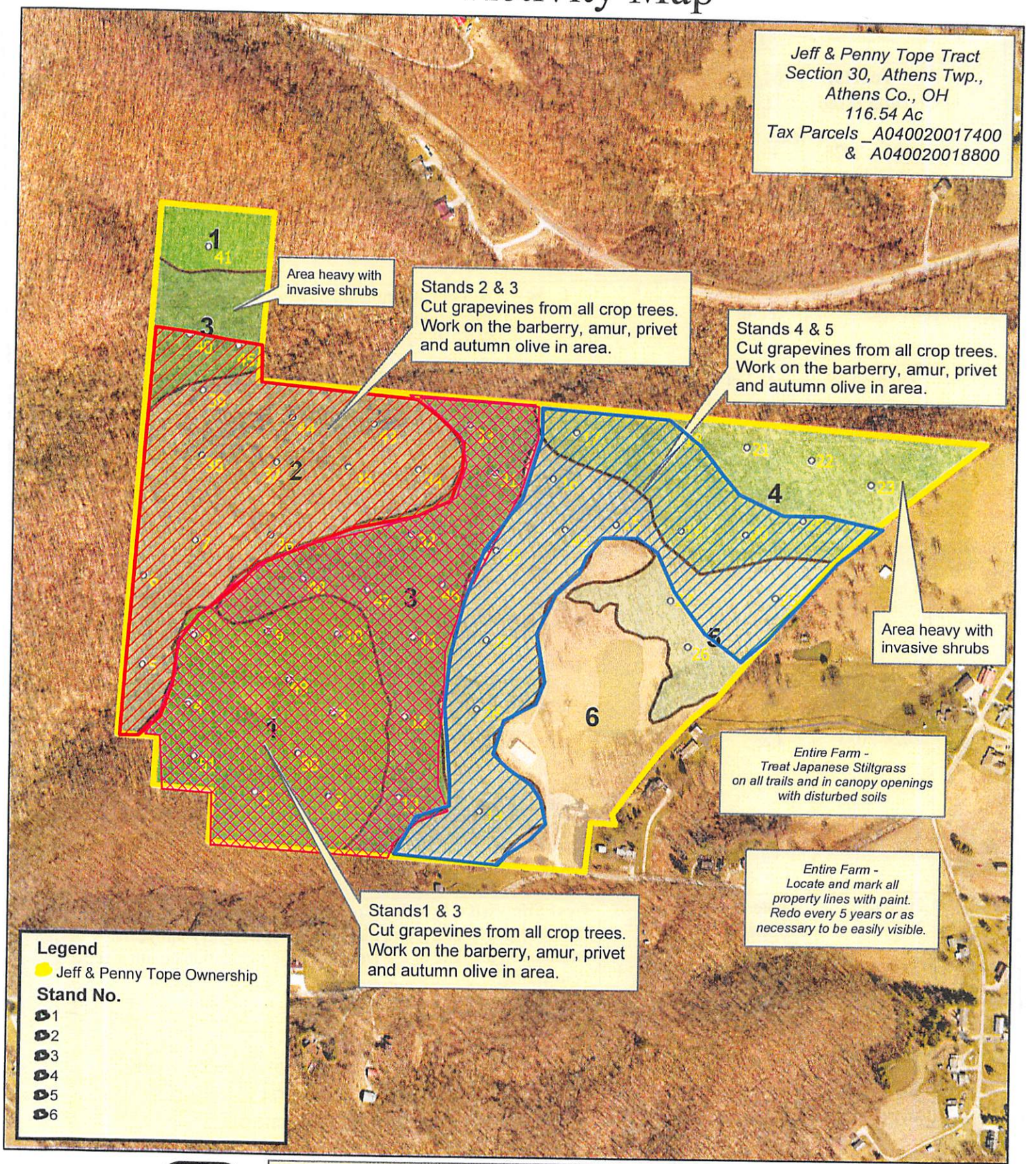
2. Landowner cuts/treats with approved herbicides any non-native invasive shrubs/grasses identified in this area. **Preferred Alternative**

Recommended Management Activity Schedule

Year(s) Suggested	Mgmt. Unit	Required Task?	Acres	Recommendations (include EQIP/CSP practice code and name if applicable)
2023, 2028 & 2033	Entire Farm	☒		Maintain/established property boundary markings. It is advised you repaint every 5 years or as necessary to remain easily visible. This may be a requirement if enrolled in OFTL or CAUV Forestry real estate property tax reduction programs.
2023 -2028	Entire Farm	☐	6 +ac	Work on all trails/roads treating the Japanese Stiltgrass infestations. *EQIP 315 Herbaceous Weed Treatment.*
2024 -2029	2 & 3 pt	☐	25 ac with heavy grapevine issues	*EQIP 314 Brush Management, Woody Invasive Plant Control* – Cover entire areas treating patches & individual plants of identified invasive woody shrubs/trees – Privet, Autumn Olive, and Barberry. Cut grapevines from "crop" trees (all poplar, cherry, walnut sugar maple and oak trees), leaving some arbors for wildlife benefit.
2024-2029	1 & 3pt	☐	20-25 ac with grapevine issues medium to heavy grapevine	*EQIP 314 Brush Management, Woody Invasive Plant Control* – Cover entire area treating patches & individual plants of identified invasive woody shrubs/trees – Privet, Autumn Olive and Barberry. Cut grapevines from "crop" trees (all poplar, sugar maple, cherry, and oak trees), leaving some arbors for wildlife benefit.
2024-2033	4 & 5	☐	38 ac total Less than ½ area with issues	*EQIP 314 Brush Management, Woody Invasive Plant Control* – Cover entire area treating patches & individual plants of identified invasive woody shrubs/trees – Privet, Autumn Olive and Barberry. Cut grapevines from "crop" trees (all poplar, cherry and oak trees), leaving some arbors for wildlife benefit.
2028 & 2022	Whole Property	☐	**Next Site Visit** – Woodland reviews are recommended at least once every five years, and plan updates once every ten years, based upon the date of the last 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.

Activity Map



June, 2023

-82.1503 39.3707

Prepared with the assistance from
USDA - Natural Resource Conservation Service.
The Plains Service Center
Athens Soil & Water Conservation District
Assisted by Dean A. Berry TSP 10-6547

0 220 440 880 Feet

Disclaimer: This drawing is not an actual survey, and is for general information purposes only.

Woodland Resource Descriptions

General Soils Information – includes a woodland soils map, soil drainage class, the general productive capacity of the soil, and a general overview of the main soil type(s):

- **Soil Type(s):** Bkf, BrD, DtE, GsC, GuC, New1AF, RcD, WhD, WhE, WkF, WmD, WtB
- **Soil Drainage Class:** A range of drainage conditions
- **Site Class: (using Woodland Productivity):** Good

General Description of Main Soils: See Soils maps and descriptions in Addendum for detailed descriptions. Also included in the Addendum is a map(s) and associated chart(s) showing the Forest Productivity (Tree Site Index) of the tract. Tuliptree - Good to Excellent
Red Oak - Fair to Good
An on-line resource that can be used to obtain additional detailed soils information is:
http://websoilsurvey.nrcs.usda.gov/app/

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

Most of the hardwood forested areas on this tract are stocked with trees of desirable species for the site and soil conditions. The woods that were heavily damaged by the 2010 tornado have begun to recover well.

Note – commercial timber production is not the top priority for the management of the forest stands at this point in time. Improving habitat for a variety of wildlife species and working on improving overall forest health are the higher priorities. That said, future timber production potential is possible for this property because of the amount of small sawtimber sized trees that are present. This property is being managed as a conservation orientated farm that will continue to be a multi-use recreational property.

Doing timber stand improvement management practices will improve the woods. Cutting grapevines from "crop" trees, along with working on the elimination of non-native invasive species of woody shrubs & trees will certainly enhance the quality and health of your timber resources. These important tasks will allow you to maximize the growth rates and viability of the trees in your woods along with benefiting a variety of wildlife species.

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. 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. The vast trail system on this tract provides travel corridors and is an enhancement to the property.

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 of the trees & shrubs in the forested land on this tract provides suitable habitat for a variety of game and non-game species of birds and animals. Low ground cover, such as the grassed pipeline easement and the mowed trails and grassed areas provide low cover feeding & nesting sites. Areas of thick understory benefit both game & non-game species of mammals and birds. Parts of Stands 2, 3 & 4 have woody shrub understory which is great as a wildlife habitat benefit. Stands 1 & 5 have the highest composition of hard mast producing tree species: oaks, hickories and beech trees.

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 (no livestock on site for many years). 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 Fairfield Soil and Water Conservation District you can implement sound soil and water conservation practices on your property.

2 un-named intermittent streams run through this tract. A large 1 ½ pond was constructed near the house (St 6) for recreational use. Numerous seeps noted on the wooded hillsides.

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 designated intermittent streams and pond.

Wetlands are extremely important for water quality, and they provide unique habitats for fish and wildlife. These are an important forest resource component for overall health of the forest system. Ephemeral or seasonal wetlands – also called vernal pools - are typically small in size and tucked within the forest cover. Vernal pools periodically dry up and do not contain fish. This drying may occur annually or just during drought years. However, these ephemeral pools provide unique habitat for amphibians like salamanders and frogs, as well as many other species of wildlife. Many landowners find that wetlands improve the aesthetics and overall enjoyment value to their land. It is very important to protect permanent and ephemeral wetland areas for the health of the forest and the environment.

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 with 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. The landowner was not aware of any sites.

Forest Health – a general description of the health of the woodland:

Most of the forest areas are only in good condition because of some of the TSI work completed by the landowners (previously noted Ailanthus parches have been eliminated). But still, grapevines need to be cut from the woods and additional timber stand improvement practices implemented to enhance oak regeneration. Unfortunately, non-native invasive plants, like Japanese stiltgrass, bush honeysuckle, autumn olive, privet & barberry in particular, have become well established in specific locations and are now spreading throughout the farm.

No problematic insect pests or diseases were noted during the woodland review (except for Emerald Ash Borer and Dutch Elm Disease). As stated, all the woods show just average overall health and vigor. Control of grapevines should be completed in all forested areas. However, native grapevines are part of the forest ecosystem; keeping a few selected vines in the low value timber areas may be considered a part of maintaining overall forest health and wildlife habitat improvement.

The main threat to forest health in this area is infestation by non-native, invasive plant species. The most common invasive plants in woodlands in this area are Ailanthus altissima, (also known as tree-of-heaven), Autumn Olive, Multi-Flora Rose, Japanese Vine Honeysuckle, Chinese Privet, Japanese Barberry and Japanese Stiltgrass.

Non-native Invasive Insects:

Emerald ash borer (Agrilus planipennis) is a beetle native to Asia that feeds on all species of ash. It is believed to have come to North America by way of the port of Detroit, Michigan in the 1990's. This insect can spread naturally from tree to tree, as well as artificially through the movement of ash material such as firewood. No practical treatments have been found to prevent infestation or to save a tree once it is infested. Research indicates that emerald ash borer is incapable of completing its lifecycle on any North American timber species other than ash trees. Trees infested with emerald ash borer usually die within wo to five years. Once emerald ash borer has been identified in a particular location, it typically kills 99% of the ash in the vicinity over the next five years. In well-stocked stands of oak, hickory, maple, and yellow-poplar, ash mortality typically results in small gaps in the forest that are quickly filled in with other desirable tree species. Stands of young, productive trees should not be harvested just to salvage a few ash trees.

The following websites should be checked periodically for the most up to date information on the emerald ash borer:

http://www.ohioagriculture.gov/eab/
http://www.emeraldashborer.info/

Gypsy moth is a non-native insect introduced in Massachusetts in 1869. It has spread as far as Minnesota, North Carolina, and Ohio. Gypsy moth caterpillars feed on several hundred species of trees and shrubs. Trees are damaged by gypsy moth caterpillars feeding on the leaves, causing partial defoliation. Complete defoliation is possible in severe outbreaks. April through early-July is the months gypsy moth caterpillars feed on the foliage. Repeated defoliations over a two-to-three-year period can weaken trees and cause their death. Preferred hosts of gypsy moth include oaks, apple, aspen, hazelnut, and birch. They seldom feed on maple, locust, ash, walnut, sycamore, dogwood, or yellow- poplar. Young stands of trees, stands of trees maintained at proper stocking, and trees growing on good growing sites are generally under less stress and are less susceptible to gypsy moth damage. Forest stand improvement can help maintain stands of trees in a vigorous condition and reduce the potential for gypsy moth damage.

Hemlock woolly adelgid is a tiny insect that feeds by sucking sap from the base of hemlock needles. It becomes evident in late fall through early spring as white, fuzzy clusters that resemble wool or cotton balls near the point where the needle is attached to the stem. Prolonged infestation by hemlock woolly adelgid causes tree mortality. If hemlock trees are known to be infested, then treatment with an appropriate insecticide can be successful in maintaining tree health and survival. Preventative treatments are impractical and unnecessary. If hemlock woolly adelgid is found on your hemlock trees, contact your service forester for information about your treatment options.

Threatened & Endangered Species – considerations for threatened and endangered species, including the direct relationship with biological diversity:
Specific information on threatened or endangered species may be obtained by contacting the Ohio Department of Natural Resources Division of Natural Areas & Preserves directly to access the Natural Heritage Database:

ODNR - Division of Natural Areas & Preserves
2045 Morse Road, Bldg. H-3,
Columbus, OH 43229-6693
Phone: (614) 265-6818
Email: NHDrequest@dnr.ohio.gov

Included in this Plan are the listing of "State Listed Species" for the applicable County.

Best Management Practices – maintaining the integrity and productivity of woodland sites (include condition of existing roads, trails, landings and stream crossings if applicable):

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). 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.

Jeff maintains the trails with his dozer to grade in any erosion issues and mows the grassed trails. The only issue with the trails is the amount of Japanese Stiltgrass that is becoming established.

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 get 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 the trails will improve access and your opportunities for use of the entire 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. Every season will provide a different perspective of your woodlands. This entire farm is used for hiking, hunting and other family and/or friends' recreational activities.

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.

Assess to this tract is from a County Road, but because of limited road frontage the wooded parts of this property has very limited public exposure. That said, the property is close to residential areas so maintaining the integrity of the wooded landscape is an important aspect of the landowner's long-term objectives. Pride in the appearance of this property is one of the guiding principles of the Owners.

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 examples of other beneficial forest resources.

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.

Included with Landowner Information is a handout of some of the "common" forestry terms that may be used in this Plan.

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.

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

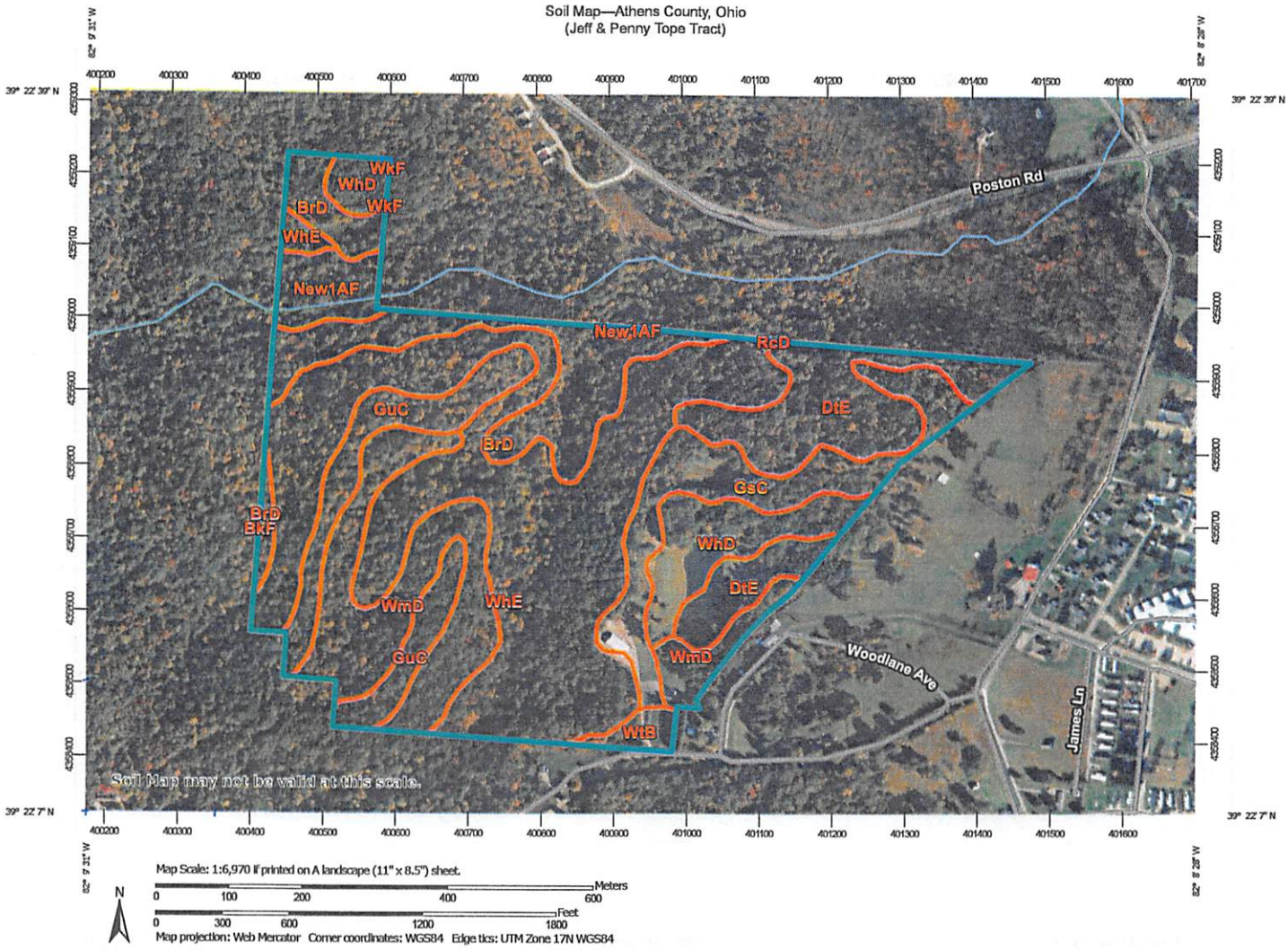
When you as a forest landowner choose to maintain your forest land rather than convert it a non-forest use, you are making a significant contribution to the carbon sequestration equation; a healthy forest sequester carbon. Forest landowners that hold an interest or focus upon the carbon cycle have opportunities 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.

Landowner Plan information packet also contains:

- Forestry Terms Handout
- OFTL Boundary Marking Handout
- USFWS Federally Listed T & E Species in Ohio
- ODNR DOW T & E Listed Species – Athens County
- Autumn Olive Fact Sheet
- Bush Honeysuckle Fact Sheet
- Chinese Privet Fact Sheet
- Japanese Barberry Fact Sheet
- Japanese Stiltgrass Fact Sheet
- Wild Grapevine Control Handout

Soil Map—Athens County, Ohio
(Jeff & Penny Tope Tract)



Map Scale: 1:6,970 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

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 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 24, Sep 8, 2022

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

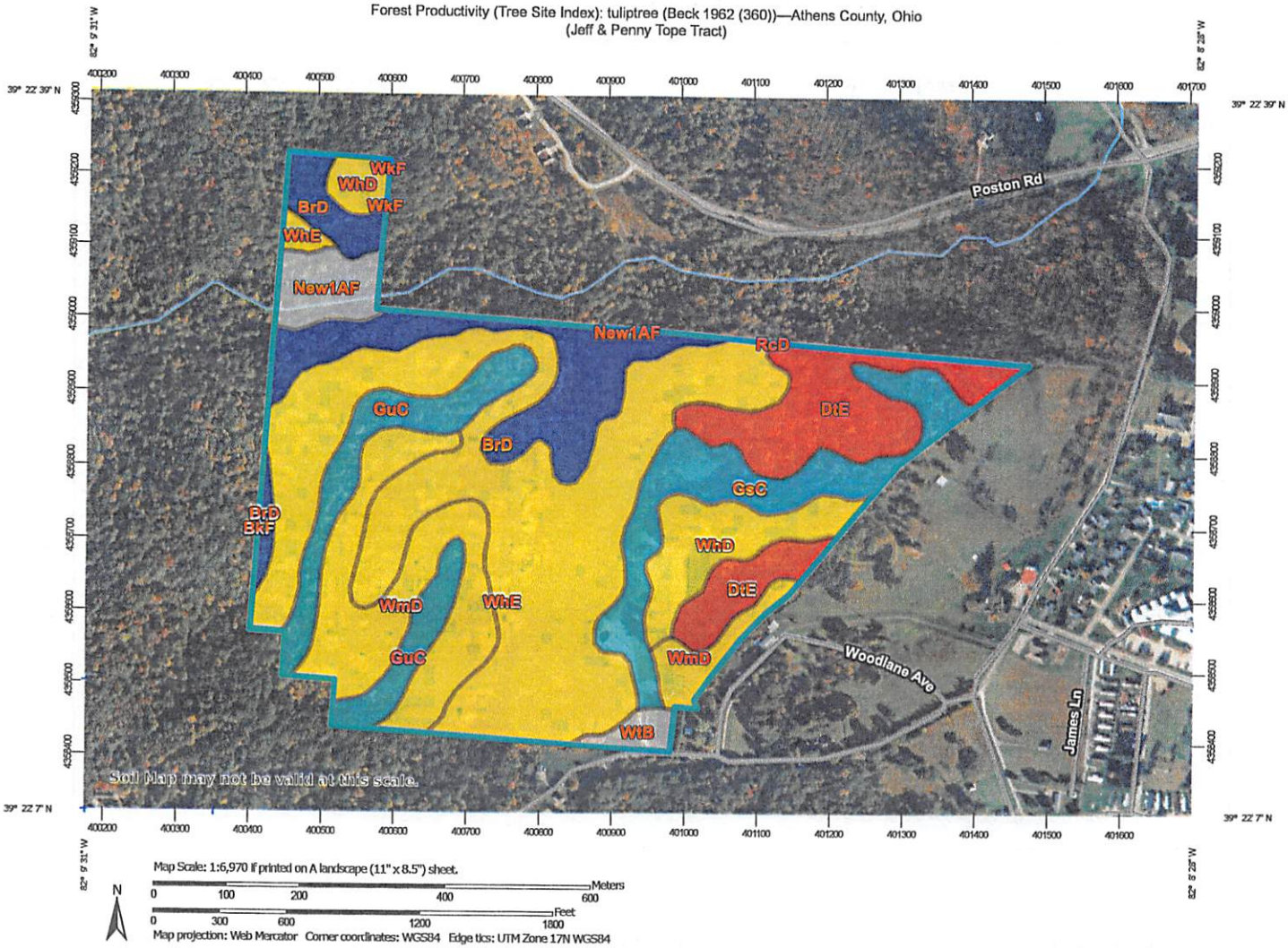
Date(s) aerial images were photographed: Oct 8, 2020—Nov 7, 2020

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	0.0	0.0%
BrD	Brookside silt loam, 15 to 25 percent slopes	13.1	11.3%
DtE	Dekalb-Westmoreland complex, 25 to 40 percent slopes	13.3	11.4%
GsC	Guernsey silt loam, 8 to 15 percent slopes	10.4	9.0%
GuC	Guernsey-Upshur complex, 8 to 15 percent slopes	9.1	7.8%
New1AF	Newark silt loam, 0 to 3 percent slopes, frequently flooded	3.5	3.0%
RcD	Richland loam, 15 to 25 percent slopes	0.0	0.0%
WhD	Westmoreland-Guernsey silt loams, 15 to 25 percent slopes	7.6	6.6%
WhE	Westmoreland-Guernsey silt loams, 25 to 40 percent slopes	41.9	36.1%
WkF	Westmoreland-Guernsey silt loams, benched, 40 to 70 percent slopes	0.0	0.0%
WmD	Westmoreland-Upshur complex, 15 to 25 percent slopes	15.9	13.7%
WtB	Woodsfield silt loam, 3 to 8 percent slopes	1.2	1.0%
Totals for Area of Interest		**116.1**	**100.0%**

Forest Productivity (Tree Site Index): tuliptree (Beck 1962 (360))—Athens County, Ohio
(Jeff & Penny Tope Tract)



Map Scale: 1:6,970 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

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
- <= 75
- > 75 and <= 90
- > 90 and <= 95
- > 95 and <= 96
- Not rated or not available

Soil Rating Lines
- <= 75
- > 75 and <= 90
- > 90 and <= 95
- > 95 and <= 96
- Not rated or not available

Soil Rating Points
- <= 75
- > 75 and <= 90
- > 90 and <= 95
- > 95 and <= 96
- 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.

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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)

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Forest Productivity (Tree Site Index): tuliptree (Beck 1962 (360))

Map unit symbol	Map unit name	Rating (feet)	Acres in AOI	Percent of AOI
BkF	Berks-Westmoreland silt loams, 40 to 70 percent slopes		0.0	0.0%
BrD	Brookside silt loam, 15 to 25 percent slopes	96	13.1	11.3%
DtE	Dekalb-Westmoreland complex, 25 to 40 percent slopes	75	13.3	11.4%
GsC	Guernsey silt loam, 8 to 15 percent slopes	95	10.4	9.0%
GuC	Guernsey-Upshur complex, 8 to 15 percent slopes	95	9.1	7.8%
New1AF	Newark silt loam, 0 to 3 percent slopes, frequently flooded		3.5	3.0%
RcD	Richland loam, 15 to 25 percent slopes	90	0.0	0.0%
WhD	Westmoreland-Guernsey silt loams, 15 to 25 percent slopes	90	7.6	6.6%
WhE	Westmoreland-Guernsey silt loams, 25 to 40 percent slopes	90	41.9	36.1%
WkF	Westmoreland-Guernsey silt loams, benched, 40 to 70 percent slopes	90	0.0	0.0%
WmD	Westmoreland-Upshur complex, 15 to 25 percent slopes	90	15.9	13.7%
WtB	Woodsfield silt loam, 3 to 8 percent slopes		1.2	1.0%
Totals for Area of Interest			116.1	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: tuliptree

Site Index Base: Beck 1962 (360)

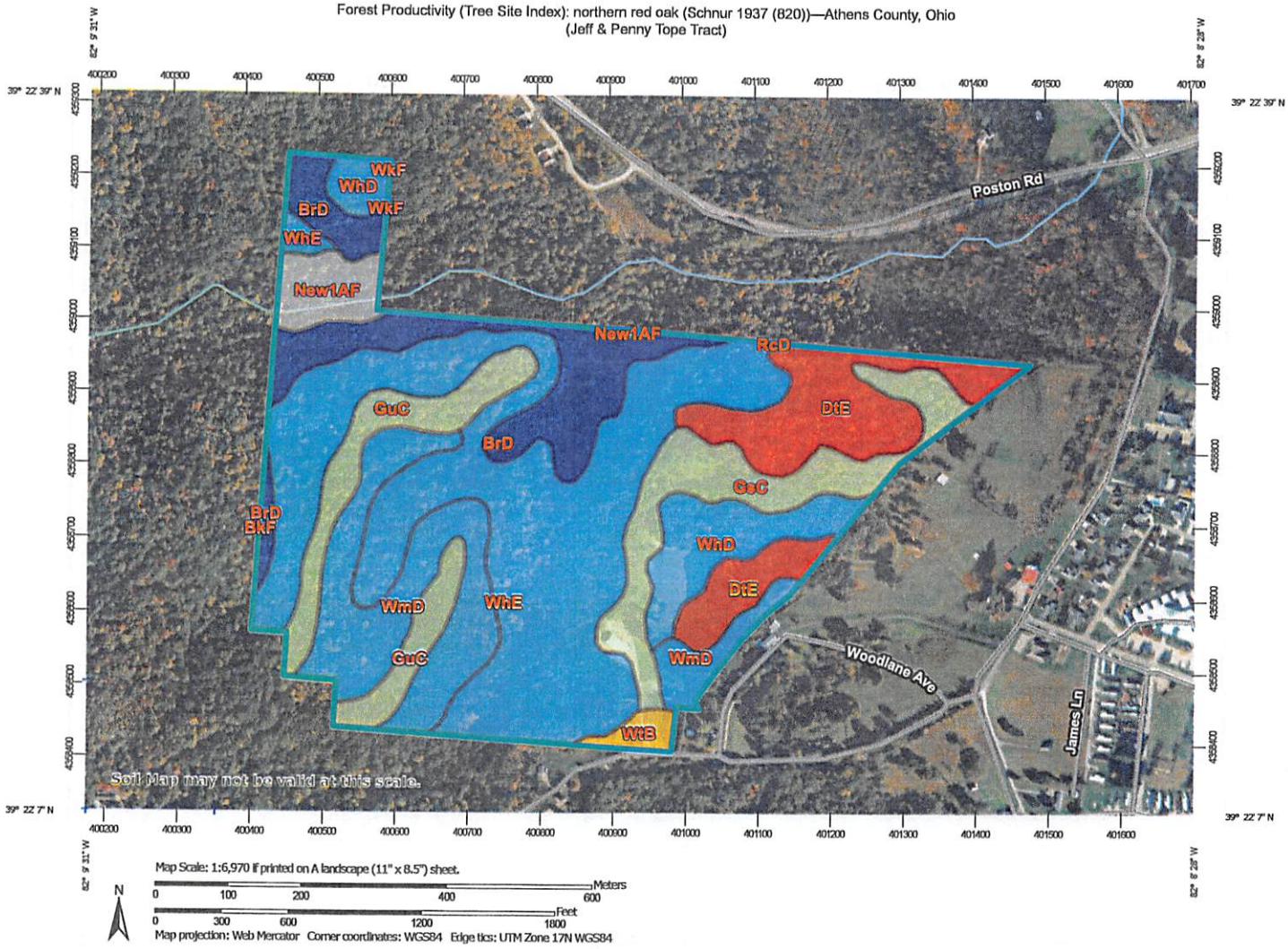
Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Forest Productivity (Tree Site Index): northern red oak (Schnur 1937 (820))—Athens County, Ohio
(Jeff & Penny Tope Tract)



Map Scale: 1:6,970 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

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
- <= 62
- > 62 and <= 70
- > 70 and <= 78
- > 78 and <= 81
- > 81 and <= 86
- Not rated or not available

Soil Rating Lines
- <= 62
- > 62 and <= 70
- > 70 and <= 78
- > 78 and <= 81
- > 81 and <= 86
- Not rated or not available

Soil Rating Points
- <= 62
- > 62 and <= 70
- > 70 and <= 78
- > 78 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 24, Sep 8, 2022

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

Date(s) aerial images were photographed: Oct 8, 2020—Nov 7, 2020

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	0.0	0.0%
BrD	Brookside silt loam, 15 to 25 percent slopes	86	13.1	11.3%
DtE	Dekalb-Westmoreland complex, 25 to 40 percent slopes	62	13.3	11.4%
GsC	Guernsey silt loam, 8 to 15 percent slopes	78	10.4	9.0%
GuC	Guernsey-Upshur complex, 8 to 15 percent slopes	78	9.1	7.8%
New1AF	Newark silt loam, 0 to 3 percent slopes, frequently flooded		3.5	3.0%
RcD	Richland loam, 15 to 25 percent slopes	80	0.0	0.0%
WhD	Westmoreland-Guernsey silt loams, 15 to 25 percent slopes	81	7.6	6.6%
WhE	Westmoreland-Guernsey silt loams, 25 to 40 percent slopes	81	41.9	36.1%
WkF	Westmoreland-Guernsey silt loams, benched, 40 to 70 percent slopes	81	0.0	0.0%
WmD	Westmoreland-Upshur complex, 15 to 25 percent slopes	81	15.9	13.7%
WtB	Woodsfield silt loam, 3 to 8 percent slopes	68	1.2	1.0%
Totals for Area of Interest			116.1	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 is designed to assist forestland owners or managers in planning the use of soils for wood crops. It provides 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 growth rate 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. *Common 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 *Base Age* is the age of trees in years on which the site index is based. "TA" indicates total age. "BH" indicates breast height age. "N/A" indicates that base age is not applicable.

The *Site Index Curve Number* is listed in the National Register of Site Index Curves. It identifies the site index curve used to determine the site index.

The *Volume Growth Rate* is the maximum wood volume annual growth rate likely to be produced by the tree species. This number, expressed as cubic feet per acre per year, is calculated at the age of culmination of the mean annual increment (CMAI). It indicates the maximum volume of wood fiber produced per year in a fully stocked, even-aged, unmanaged stand.

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	
			Cu ft/ac/yr	
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	

Forestland Productivity–Athens County, Ohio				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			Cu ft/ac/yr	
BrD—Brookside silt loam, 15 to 25 percent slopes				
Brookside	Northern red oak	86	72.00	Northern red oak, Tuliptree
	Tuliptree	96	100.00	
DtE—Dekalb-Westmoreland complex, 25 to 40 percent slopes				
Dekalb	Black cherry	82	—	Black oak, Eastern white pine, Red pine, Tuliptree, Virginia pine, White ash
	Northern red oak	62	29.00	
	Tuliptree	75	—	
Westmoreland	Eastern white pine	75	143.00	Black cherry, Eastern white pine, Northern red oak, Red pine, Tuliptree, Virginia pine, White ash
	Northern red oak	81	57.00	
	Tuliptree	90	86.00	
GsC—Guernsey silt loam, 8 to 15 percent slopes				
Guernsey	Northern red oak	78	58.00	Northern red oak, Tuliptree
	Tuliptree	95	99.00	
GuC—Guernsey-Upshur complex, 8 to 15 percent slopes				
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	—	—	
	White oak	—	—	
Upshur	Eastern white pine	80	143.00	Eastern white pine, Tuliptree, Virginia pine, White ash
	Northern red oak	65	43.00	
	Tuliptree	80	72.00	
	Virginia pine	66	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	
			Cu ft/ac/yr	
New1AF—Newark silt loam, 0 to 3 percent slopes, frequently flooded				
Newark	Cherrybark oak	—	—	American sycamore, Eastern cottonwood, Sweetgum
	Eastern cottonwood	89	100.00	
	Green ash	—	—	
	Overcup oak	—	—	
	Pin oak	96	72.00	
	Shumard's oak	—	—	
	Sweetgum	85	86.00	
RcD—Richland loam, 15 to 25 percent slopes				
Richland	Black walnut	—	—	Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Northern red oak	80	57.00	
	Tuliptree	90	86.00	
	White ash	—	—	
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	—	—	
	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	
			Cu ft/ac/yr	
WhE—Westmoreland-Guernsey silt loams, 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	
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	—	—	
	White oak	—	—	
WkF—Westmoreland-Guernsey silt loams, benched, 40 to 70 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	—	—	
	White oak	—	—	
WmD—Westmoreland-Upshur complex, 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	
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	

Forestland Productivity–Athens County, Ohio				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			Cu ft/ac/yr	
WtB—Woodsfield silt loam, 3 to 8 percent slopes				
Woodsfield	Black oak	75	—	Black oak, Northern red oak, Sugar maple, White oak
	Northern red oak	68	—	
	Sugar maple	80	—	
	White oak	76	57.00	

Data Source Information

Soil Survey Area: Athens County, Ohio
Survey Area Data: Version 24, Sep 8, 2022