Athens Co. Auditor

Woodland Stewardship Management Plan

Owner's Information:

Case Number: _____

Owners: Rebecca L. Acheson Todd B. Acheson

Signed: _____ Signed: _____

Date: November 3, 2020

Preparer's Information:

Prepared by: Dean A. Berry

Signature: _____

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

740-541-4647 mobile
fatlabtreefarm@gmail.com

Date: October 13, 2020
Field Inspection Date

This plan is valid for the period beginning November 3rd, 2020 and ending November 2nd, 2030.

Plan Status: New

Inventory Method: On Site Property Review

NRCS Representative Signature: Date:

Woodland Stewardship Management Plan

Owner	Rebecca & Todd Acheson		
Address	1451 Grim Road		
	Athens, Ohio, 45701		
Phone		Case Number	
Cell	740-591-1025 Todd 740-590-2958 Rebecca	Email Address	rebecca_acheson@fastmail.fm acheson@fastmail.com
County	Athens	Township/Village/City:	Sec 26 Lodi Twp.
Parcel(s):	J010010034600		
Location:	Located along both sides of Grim Road		

Woodland Stewardship Acreage: 66.6

Non-woodland Stewardship Acreage*: 41.59

Total Property Acres 108.19

* Non-woodland acres for which stewardship recommendations are made. **Stands: 2, 5, 8 & 9**

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 Tax Reduction

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

Latitude: 39.215633 Longitude: -82.044339

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. To continue to improve all aspects ...ve plants, rotationally mowing open areas to ...rest management for both traditional an...

2021 - Current
- Consistent invasive removal work completed on going
- Annual rotational mowing, Stand # 2
- Planted native trees, shrubs & plants on-going (woodland medicinal plants included)

General ...

Athens County is located in the un... Slope and erosion hazard is the major land use limita... ood forest region. Major forest types include Appala... k-hickory, successional, Virginia pine, and ... in Athens County is in areas of steep and ver... farm.

Rebecca & Todd acquired this pro... the farm, in a house they had constructed. The origina... is a rental. White Pines were planted in various locations ...ricultural use. Many of the wooded hollows on this tract were pastured at one point. Invasive shrubs are becoming an issue on this tract and will be addressed.

- enter a parcel id -

PARID: J010010034600
ACHESON TODD B & REBECCA L **1351 GRIM RD**

Parcel

Address	1351 GRIM RD
Unit	
Class	A - AGRICULTURAL
Tax Roll	RP_OH
Land Use Code	101 - A - CASH GRAIN OR GENERAL FARM
Neighborhood	00009000 - J01
Total Acres	108.19
Taxing District	J01
District Name	LODI TOWNSHIP
Gross Tax Rate	73.06
Effective Tax Rate	

Owner

Tax Year	2019
Owner	ACHESON TODD B & REBECCA L

Tax Mailing Name and Address

Mailing Name 1	ACHESON TODD B
Mailing Name 2	& REBECCA
Address 1	1451 GRIM RD
Address 2	
Address 3	ATHENS OH 45701
Mortage Company	
Mortage Company Name	
Treas Code	

Legal

Legal Desc 1	13-04-00 SEC 26 108.190A
Legal Desc 2	
Legal Desc 3	
Legal Acres	108.19

Homestead Credits

Homestead Exemption	NO
Owner Occupancy Reduction	YES

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

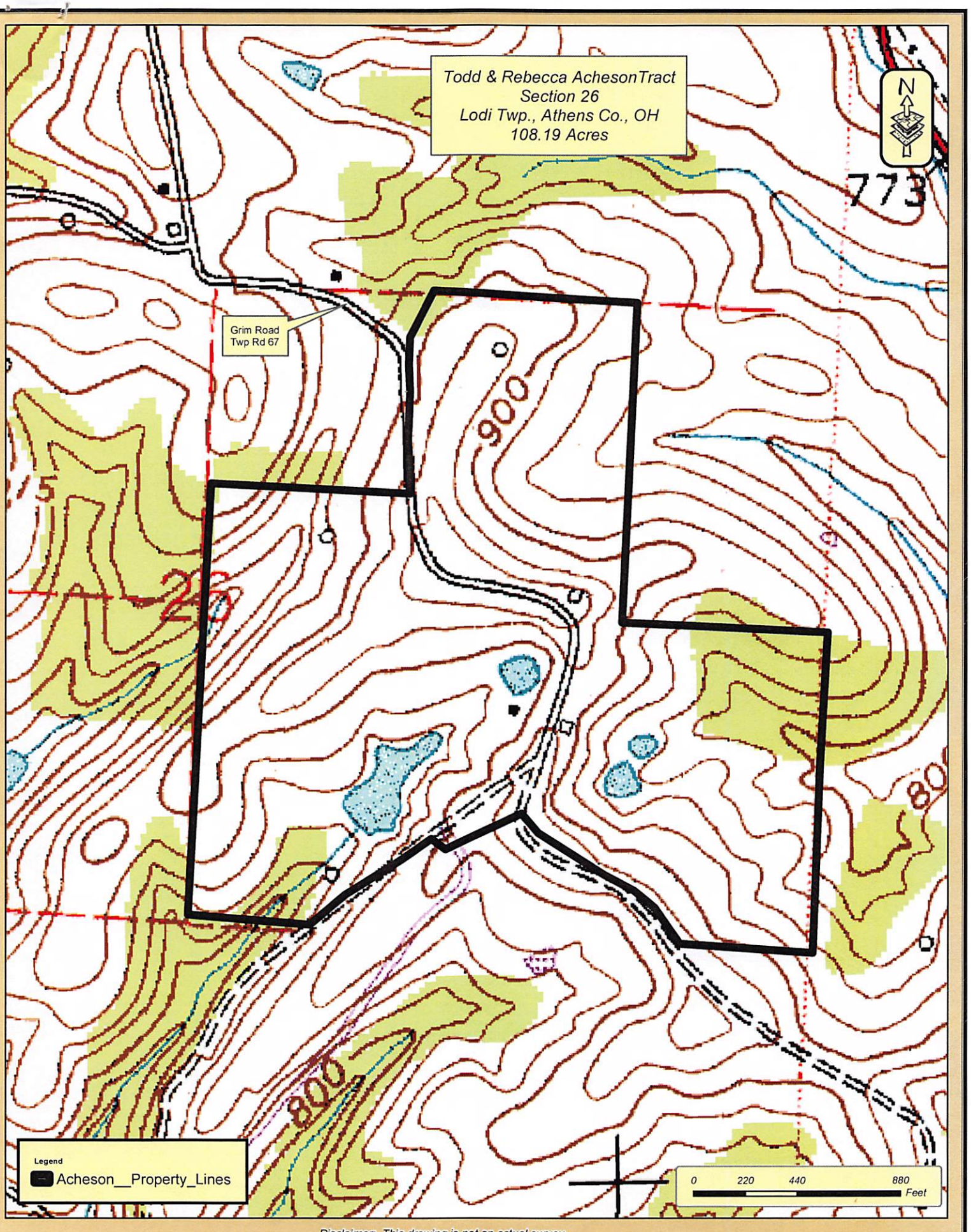
Forestry Terms – Forestry Terminology for Landowners, Professional foresters, and others:

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.

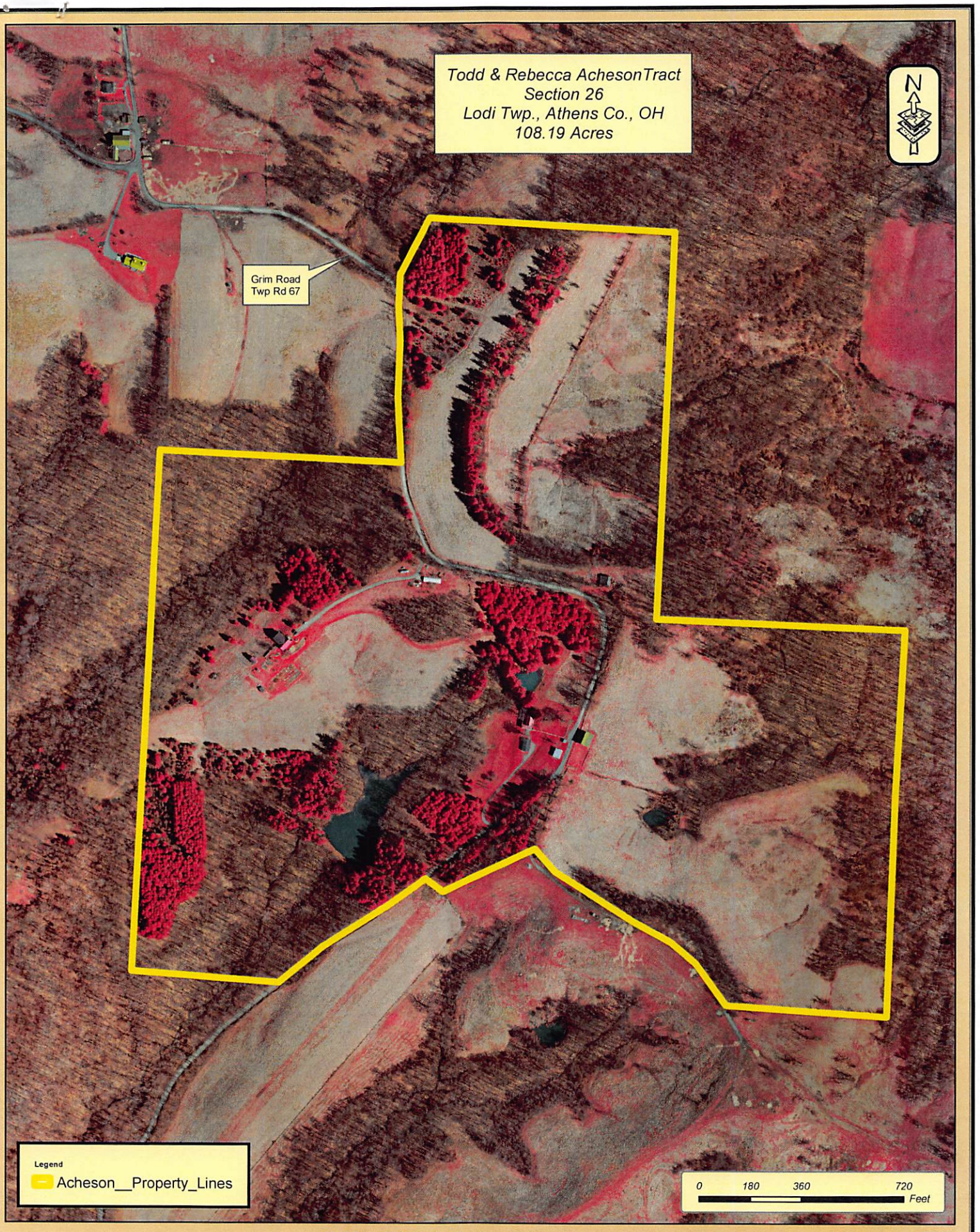
You may access "The Dictionary of Forestry" for free at SAF at www.dictionaryofforestry.org. If internet access is not available, one may purchase a printed version from SAF (toll free 866-897-8760).

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



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

Cartography By: Dean A Berry



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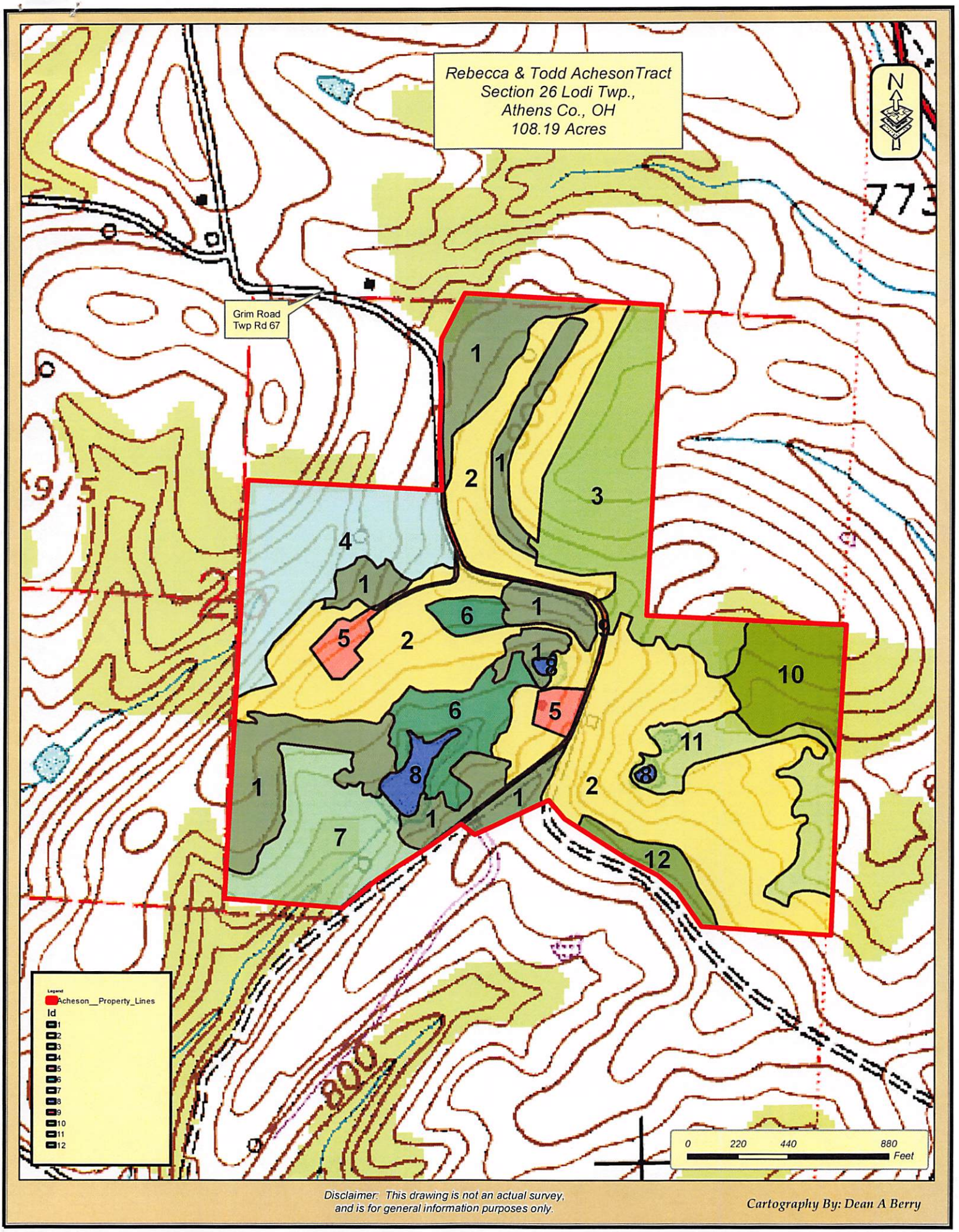

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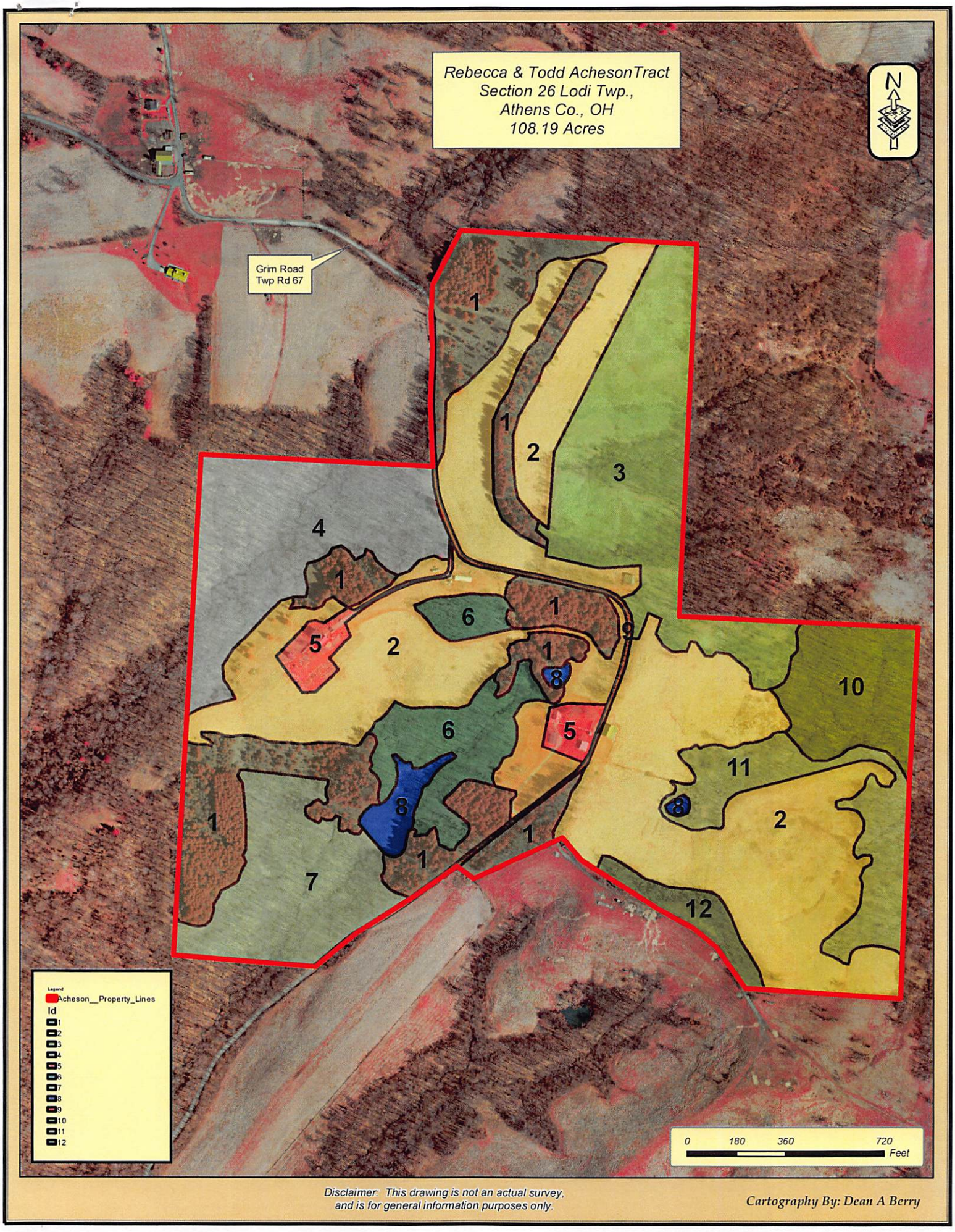

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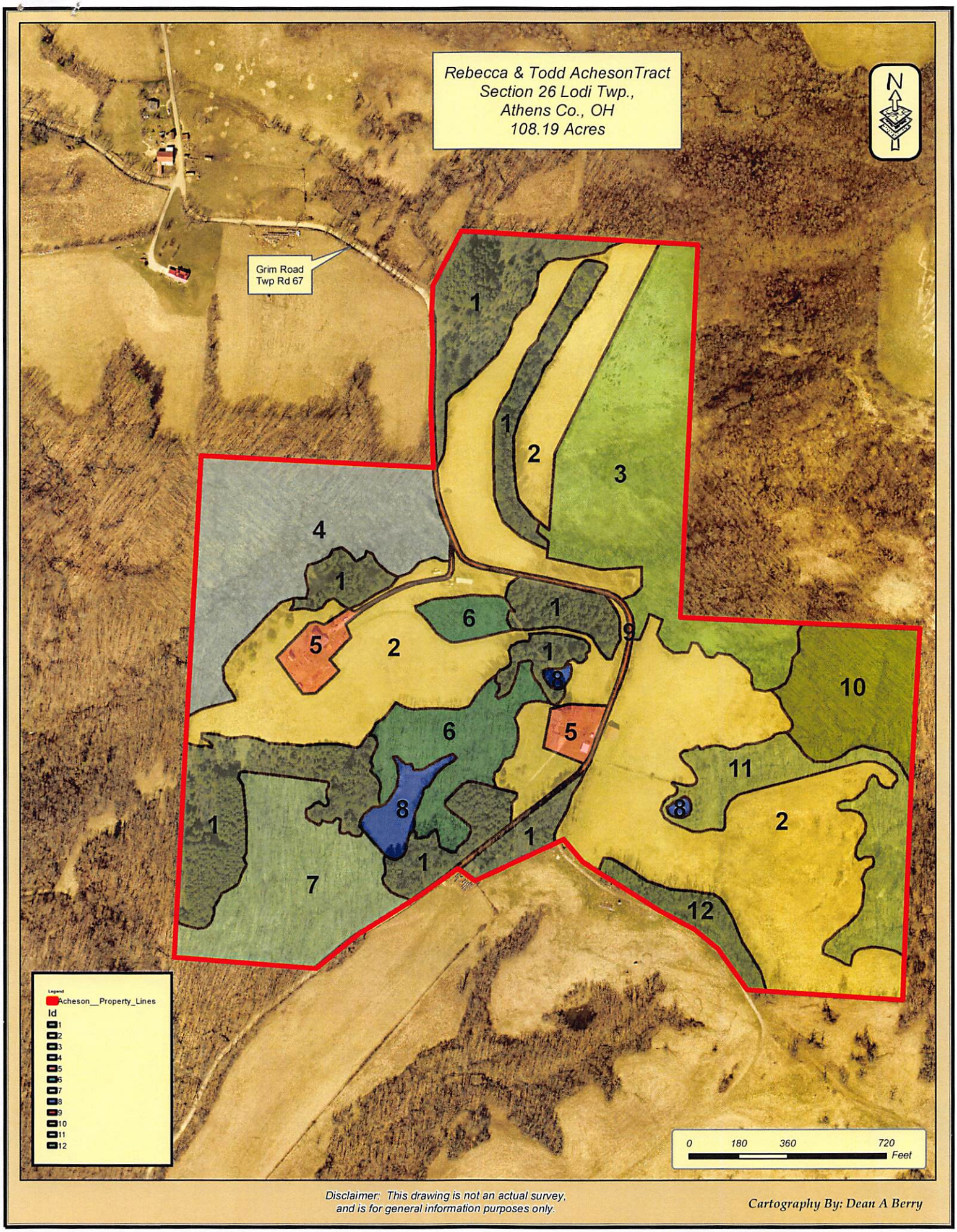

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Cartography By: Dean A Berry

Woodland Stand Description and Management Recommendations

Stand # 1 - **18.8** acres Pine Plantations (8 separate patches)

Dominant Species: Planted_White Pine some Spruce Native Hwds._Am Elm, Black Locust, Black Cherry, Tulip Poplar, Red Maple

Forest Type or Dominant Vegetation: Softwood Plantations

Stand Diameter or Size Class: Poletimber/Small sawtimber

Stocking Level: Fully stocked to overstocked

Stand History: Other Tree planted by parents in the 1980's_Mead Free Tree Program

Topography: Gently sloping patches

Invasive plants or insects impacting this stand: White Pine Adelgid, Autumn Olive, Japanese Barberry, Privet, Japanese Stiltgrass & Multi Flora Rose

Stand Description: All the White Pine patches on this farm is covered in this Stand. These plantations were established in various years during the 1980's in areas no longer in agricultural use. Trees were established on an 8' X 8' spacing. Some natural thinning has occurred. A limited number of native hardwood trees have invaded into this area, some are valuable species like Black Cherry and Tulip Poplar. The pine trees average 8"-12" in diameter at dbh. Tree growth is at an acceptable rate, but the amount of live crown is less than the 1/3 live crown ratio which is the desirable standard. Portions of these stands are becoming infected with White Pine Adelgid - still spotty, not found throughout all the stands. Stand near the west property line has the heaviest infection. Autumn Olive found along edges of the various patches. Barberry near the pond area.

Past management activities completed in this stand: stands left to grow after being planted.

Management Recommendations:
Cut grapevines from pines and begin work on reducing the non-native invasive species in this area as time permits. J. Stiltgrass on trail & in western pine stand.
Possible thinning to improve air flow through some of the stands.

If a timber harvest is recommended: No not in this 10-year management cycle, unless the Adelgid infestation reached a point of causing tree mortality.

Comments: These areas provide habitat diversity for a variety of wildlife species. Monitor Adelgid infestation at least annually to see if it is spreading.

Desired Future Conditions: Maintain these areas as a pine plantation if possible.

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

Desired Stand Structure: Even Aged

Woodland Stand Description and Management Recommendations

Stand #2 – 37.29 acres Non-Forested Areas – Agricultural/Open Area

Dominant Species: grasses, broadleaf weeds, scattered - Black Walnut, Hickory spp, Sugar Maple, Black Locust, Black Cherry, Dogwood, Autumn Olive/Ailanthus/Sumac along edges and in clumps. Planted – a variety of fruit trees (plum, pear, cherry & apple) White Pine

Forest Type or Dominant Vegetation: See Above

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: open agricultural lands

Topography: Rolling slope areas and narrow ridgetops

Invasive plants or insects impacting this stand: Autumn Olive/Privet/Ailanthus along edges.

Stand Description: This area covers the agricultural fields and grassed areas located on this farm. Autumn Olive is heavily established along the edges of much of these open areas. On the east side of Grim Rd, Ailanthus is well established in areas (addressed in adjacent stand descriptions). Most of the open areas are rotationally mowed to reduce noxious weeds and slow the invasion of non-native woody shrubs. Orchard established along west side of Grim Rd. Many of the scattered pine trees are remnants of trees planted by Rebecca's parents in the 1980's. Several older structures are located in this area.

Past management activities completed in this stand: mowing, non-native invasive woody shrub eradication work.

Management Recommendations:
Continue to work on the eradicate of any non-native invasive species found as time permits
Continue to rotationally mow for wildlife benefit. If areas are not to be mowed, consider planting with a mixture of desirable tree species that will benefit wildlife.
Pollinator plots establishment or additional development of native plants already growing

Is a timber harvest recommended? N/A

Comments: Plans for these areas are undetermined at this time. If these areas are not bush hogged at least semi-annually, the Autumn Olive/Multi Flora Rose will envelop these areas.

Desired Future Conditions: Maintain as "open" lands if feasible.

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Woodland Stand Description and Management Recommendations

Stand #3 – 12.8 acres

Dominant Species: Black Locust, Dogwood, Hawthorn, Black Walnut, Spicebush, Hickory spp., Yellow Buckeye, Black Cherry, Sassafras, with limited stocking of Yellow Poplar, Red Oak spp., White Oak spp., Red Maple, Sugar Maple and Sycamore.

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Seedling/Sapling with areas of mainly pole trees

Stocking Level: Under stocked overall with desirable species, clumps of pole trees

Stand History: Old-Field Reversion, abandoned pasture areas

Topography: Gently sloping, mid to lower slope areas – hollow area- small ravines

Invasive plants or insects impacting this stand: EAB, Autumn Olive, Privet, Japanese Vine Honeysuckle, Multi Flora Rose, scattered grapevines

Stand Description: This area was once open pasture field that was abandoned 30+ years ago, with parts mowed till recently. These areas are now thick naturally generated young forest stands. Portions of these areas have a brushy understory, other areas are open with grass and briars between the Autumn Olive clumps and trees. Nice sapling sized trees in patches, but other areas are heavy with spice bush, autumn olive & multi flora rose. Several small drainages on slope faces, vernal pools and seeps are evidence. This is a great area for many species of birds and mammals, so leaving some grapevine arbors will provide a soft mass food source. Many parts of this area are a jungle (near fence lines).

Past management activities completed in this stand: property lines located & planned to be painted, some mowing done in the past, but not for several years.

Management Recommendations:
Continue to locate and mark all boundary lines with paint, remark every 5 years or as needed to remain easily visible.
Work on the eradication of the non-native invasive species and cut grapevines in potential future crop trees -especially all the Black Walnut, Sugar Maple, Black Cherry and Oak trees.

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

Comments: This area is well on its way to becoming forestlands again. Autumn Olive needs to be addressed.

Desired Future Conditions: Reduce the stocking levels of Autumn Olive while improving the overall stand composition by cutting grapevines and release work of over topped natural regeneration.

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, honey locust and sassafras.

During late succession, if the seed source is close by, osage orange, 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 # 4 – 10.4 acres

Dominant Species: Yellow Poplar, Red Maple, Sugar Maple, Black Cherry, Yellow Buckeye, Am. Elm, Black Walnut, Red Oak spp., White Oak spp., and Hickory trees

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Poletimber/Small sawtimber with scattered large, open crown "old pasture" trees

Stocking Level: Fully stocked in most areas with desirable species

Stand History: Grazing 50+ yrs. ago

Topography: Gently sloping drainage area with steep slope sections near stream

Invasive plants or insects impacting this stand: scattered grapevines, Privet, Autumn Olive, Multi-Flora-Rose, EAB damage

Stand Description: This stand covers the wooded hollow in the NW corner of the farm, near Todd & Rebecca's home. At one point, this area had been pastureland and has reverted into forestland – late successional stage of development. Species composition is heavy to pioneer, "soft" hardwood, lower slope area, with oaks & hickory trees present in the upper, drier soils areas. Trees are growing at an acceptable rate. Entire area contains quality pole/small log sized sugar maple trees. An intermittent stream flows out of this drainage.

Past management activities completed in this stand: property lines located and marked with red paint.

Management Recommendations:
Work on eradication of any non-native invasive species (Privet & Autumn Olive) as time permits
Cut grapevines from "crop" trees - Oaks, B. Cherry, Yellow Poplar, Sugar Maple
Continue to paint property lines. Redo every 5 years or as necessary to remain easily visible.

If a timber harvest is recommended: No, not in this 10-year Plan

Comments: This is a low priority area for work once the grapevines are cut from potential future "crop" trees.

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

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 5 - 2.0 acres total Non-Stewardship Area –Residential Areas

Dominant Species: NA

Forest Type or Dominant Vegetation:

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: N/A

Topography: Level

Invasive plants or insects impacting this stand: none noted

Stand Description: This area covers the two residential structures located on this farm. Todd & Rebecca reside in the home located back the long lane. The home near Grim Rd. was originally constructed in 1804 (main part of current house) and is where Rebecca's parents resided after they bought the farm from Richard Grim. Included in this stand is the yard space surrounding each structure and all the associated outbuildings and driveways.

Past management activities completed in this stand: Numerous plantings, mowing

Management Recommendations:
Annually inspect for invasive species along edges of yard & eradicate any found

Is a timber harvest recommended? N/A

Comments: Assortment of plants, shrubs and trees planted around the houses.

Desired Future Conditions: NA

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Woodland Stand Description and Management Recommendations

Stand # 6 – 5.1 acres

Dominant Species: Red Oak spp., White Oak spp., Hickory Spp. Red Maple, Sugar Maple, Black Cherry, Black Locust, Sassafras

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Poletimber/Small sawtimber

Stocking Level: Fully stocked in most parts of this stand

Stand History: Old-Field Reversion

Topography: Gently sloping hillside areas

Invasive plants or insects impacting this stand: scattered grapevines, Autumn Olive, Privet, Barberry

Stand Description: This area covers the forested drainage above the pond area and the small patch of woods near the orchard area in Stand 2. This stand is a naturally regenerated forest areas like many of the other woodlots on this tract. Brushy understory in both areas with briars and multi flora rose. Some nice white oak pole trees, but many have epicormic branching because of sunlight on the stem of the tree. This will be a hard area to keep non-native invasive species out of because of the amount of sunlight in the understory.

Past management activities completed in this stand: none noted at time of inspection.

Management Recommendations:
Cut scattered grapevines from "crop" trees in this area
Work on reducing the amount of non-native invasive species identified in this area as time permits -mainly along the field edge area

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

Comments: Not a high priority area for work at this time.

Desired Future Conditions: Allow area to mature 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 # 7 – 7.6 acres

Dominant Species: Black Cherry, Red Maple, Dogwood, Black Oak, White Oak, Hickory spp., Red Bud, Sassafras, a few Am. Beech, Yellow Buckeye, Black Walnut, Yellow Poplar

Forest Type or Dominant Vegetation: Upland Central Hardwoods

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

Stocking Level: Fully stocked in most areas with desirable hardwood tree species, gaps and openings of seedlings/saplings, briars and woody shrubs only

Stand History: Old-Field Reversion

Topography: Gently sloping side slope drainage area

Invasive plants or insects impacting this stand: light infestation of grapevines, Autumn Olive, Barberry, Privet, Japanese Vine Honeysuckle and EAB has deadened all the Ash trees

Stand Description: This area is similar to Stand 4, with the area being abandoned pastured lands that has been left to naturally regenerate. Again, this area is a mixture of hardwood pole/ small sawlog sized trees and patches woody shrubs. This Stand covers the drainage below the large pond, between pine stands and Grim Rd. Parts of this area are thick multi-flora-rose, autumn olive and then thick spice bush areas. Great diversity for wildlife species. Some large "legacy" trees, White Oak, Black Oak & Poplar trees that were present when this was open pasture lands.

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

Management Recommendations:
Cut scattered grapevines from "crop" trees (light infestation)
As time permits, work on the non-native invasive species noted along opening edges and in the understory area.
Continue to mark with paint the property lines to discourage illegal trespass.

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

Comments: This area just needs more time to grow into a viable hardwood stand. Cutting the grapevines will improve stand development. A persimmon trees was identified in this area.

Desired Future Conditions: Allow this stand to naturally mature while controlling non-native invasive species.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 8 - 1.3 acres Non-Forested Area – Ponds

Dominant Species: N/A

Forest Type or Dominant Vegetation: N/A

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: N/A

Topography: N/A

Invasive plants or insects impacting this stand: a variety of non-native invasive species found along pond edges -Autumn Olive is the major species of concern.

Stand Description: This area covers the 3 ponds located on this farm. The largest pond is located along the west side of Grim Road and is surrounded by conifer stands and hardwood trees. A small pond on the same side of the road is located in the pines by the original house site. The final pond is located in the field area on the east side of the road. These ponds provide year-round water sources for wildlife. In addition, these ponds add to the index for habitat diversity for the variety of fish, reptile, amphibian, insect, and aviary species found in these areas.

Past management activities completed in this stand: none noted at time of inspection.

Management Recommendations:
Annually inspect for invasive species along field edges & eradicate any found

Is a timber harvest recommended? N/A

Comments: Well-maintained large pond. Ponds constructed by Richard Grim when he owned this farm.

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Woodland Stand Description and Management Recommendations

Stand # 9 - 1.0 acres Non-Forested Area –Twp. Rd.

Dominant Species: NA

Forest Type or Dominant Vegetation:

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: N/A

Topography: Rolling

Invasive plants or insects impacting this stand: a variety of non-native invasive species found in road banks – addressed in adjacent stand descriptions.

Stand Description: This area covers Grim Road, Twp. Road 67.

Past management activities completed in this stand: N/A

Management Recommendations:
Annually inspect for invasive species along road banks & eradicate any found

Is a timber harvest recommended? N/A

Comments: Township Trustees maintain the roads and mow along the road edges.

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Woodland Stand Description and Management Recommendations

Stand # 10 – 5.0 acres

Dominant Species: Red Oak, Black Oak, White Oak, Chestnut Oak, Hard Maple, Hickory Spp., Black Cherry, Am. Beech

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Medium/Large sawtimber

Stocking Level: Fully stocked

Stand History: Grazing in the past (suspect in the 1950's - 1960's era)

Topography: Gently sloping

Invasive plants or insects impacting this stand: a few scattered grapevines

Stand Description: This area covers small hollow area in the eastern corner of this farm. This area contains the largest (and most valuable) trees on this farm. Overall, most of the area is closed canopy with an open understory. Very few ferns or native forest plants present (past grazing indicator). Saplings in the understory are shade tolerant species. Trees appear to be old but still have full leaf foliage in most of the crowns. Great mixture of oak species that provide valuable hard mast, acorns.

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

Management Recommendations:
Continue to mark property lines with paint, redo every 5 years or as needed
Cut the few scattered grapevines from "crop" trees in this area

If a timber harvest is recommended: No, not in this 10-year management period. Landowner will monitor forest health and may decide to remove some trees if they begin to show decline.

Comments: Not a lot to do in this stand at this time. This is a great woods, leave it alone and enjoy.

Desired Future Conditions: Maintain this area as a mature hardwood area.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 11 – 5.3 acres

Dominant Species: Yellow Poplar, Sugar Maple, Red Maple, Black Cherry, Hawthorn, Hickory spp., with some _Am. Elm, Red Oak Spp., White Oak and Black Walnut

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Sapling/Poletimber

Stocking Level: Under stocked with desirable tree species

Stand History: No Prior Management was open land at one point that has naturally regenerated

Topography: Rolling lower-slope areas

Invasive plants or insects impacting this stand: Ailanthus, Privet, Autumn Olive, EAB has killed all Ash trees

Stand Description: Again, this area was a pasture area that was abandoned and has reverted to forest land. This is a composite area of natural late successional development of woody shrubs and sapling/pole sized trees. Spots of thick understory because of the open canopy. Grapevines have not been treated in this area yet. Several patches of Ailanthus have become established in this area, near eastern property line.

Past management activities completed in this stand: Property line located and will painted

Management Recommendations:
Cut grapevines from this area – at least cut from potential crop trees
Continue to mark property lines with paint, redo every 5 years or as needed
Work on the eradication of the Ailanthus near the property line area and the identified patches of privet along Stand 2 field edge.

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

Comments: This area is higher for attention because number of Ailanthus trees in this area. Priority should be given to treating the Ailanthus before it spreads throughout the area.

Desired Future Conditions: This area will develop into a desirable mixed hardwood stand in the future, with some timber stand improvement (TSI) work

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand #12 – 1.6 acres

Dominant Species: Black Locust, Dogwood, Hawthorn, Black Walnut, Spicebush, Black Cherry, Sassafras, Ailanthus

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Poletimber/Small sawtimber

Stocking Level: Under stocked overall with desirable species

Stand History: Old-Field Reversion, abandoned pasture slope area

Topography: Gently sloping, upper slope area

Invasive plants or insects impacting this stand: Ailanthus, Japanese Vine Honeysuckle, Multi Flora Rose, scattered grapevines

Stand Description: Again, this narrow slope area was once and open pasture field that was abandoned 30+ years ago. This woods is comprised of pioneer species and very few trees that will ever develop into valuable commercial trees. That said, this is a great area for many species of birds and mammals, so leaving some grapevine arbors will provide a soft mass food source This area is a jungle (near fence line). Ailanthus patch is an issue in this area that needs addressed asap.

Past management activities completed in this stand: property lines located & planned to be painted

Management Recommendations:
Continue to locate and mark all boundary lines with paint, remark every 5 years or as needed to remain easily visible.
Work on the eradication of the Ailanthus trees
Cut grapevines from the Walnut trees in this area.

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

Comments: Low priority area for work once the Ailanthus is addressed.

Desired Future Conditions: Wildlife area

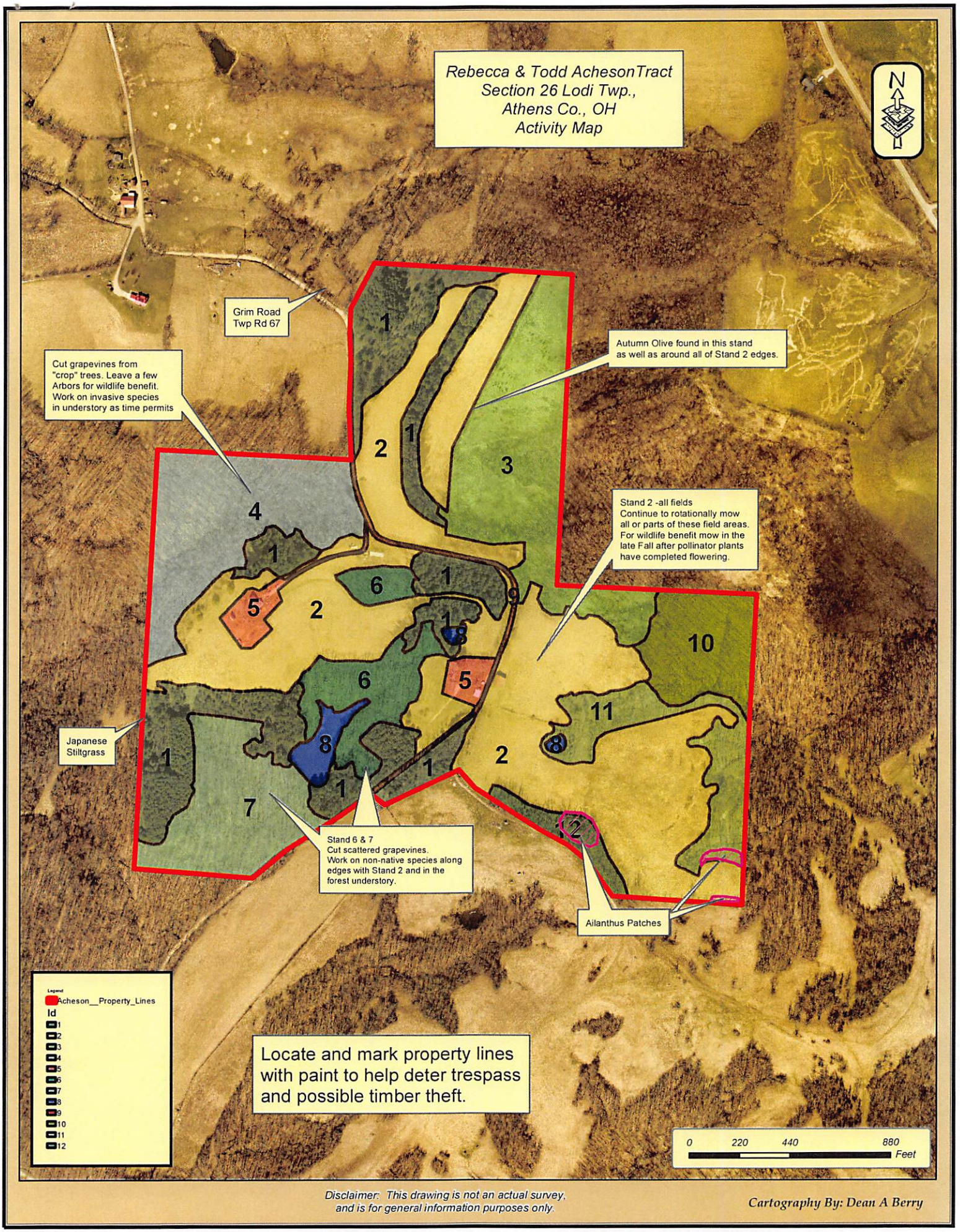
Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Recommended Management Activity Schedule

Year(s) Suggested	Mgmt. Unit	Required Task?	EQIP Practice?	Acres	Recommendations
2020, 2025, 2030	All Farm	☒	☐	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.**
2021-2030	1 & 2 mainly but plan on covering parts of entire farm	☐	☒	4+ ac	Begin treating Japanese Stiltgrass that has become established in trails and adjacent wooded areas. This will take several Spring/Fall treatments to begin to slow the spread of this noxious grass.
2021-2026	11 & 12	☐	☒	3+ acres total but cover entire stands	Begin eradication of Ailanthus trees in these areas. This will take several years to eradicate the seed sprouting once the large trees are deadened. Possible EQIP.
2020 -2030	2	☐	☐	37 ac total	Continue to rotationally mow portions of this area annually - seasonal mowing in late Fall, avoid clumps of sumac and tree seedlings
2021 -2030	All Farm	☐	☐	1-2 ac	Continue to plant shrubs & trees. In addition, work to re-establish native forest plants in appropriate sites. Possible EQIP
2021-2030	All Farm	☐	☒	20+ ac	Work on cutting and treating the large "fruit" producing non-native invasive shrubs found along the edges and in open "sunlighted" areas. Go about 20' back into the woods treating the bushes.
2021-2026	4,6,7 & 10	☐	☒	12+ ac but cover entire stands	Work on cutting scattered grapevines from "crop" trees – leave a few arbors for wildlife benefits in Beech, Sycamore, Red Maple trees. EQIP - light
2024 & 2029	Whole Property	☒	☐	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 State/County forester first to ensure compliance with your approved woodland stewardship management plan



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

Cartography By: Dean A Berry

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): DtF, GuD, VbD, WdC, WmC, WmD, 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): Fair to Good Northern Red Oak

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

Future timber production potential is possible for this property but is not the landowner's primary objective. Stand 10 contains the largest sawlog trees on this farm. The trees are large and old but still appear healthy. The original wooded areas (hollows & steep slopes) of this farm contain maturing trees that are in the small sawlog size classification. The majority of the flatter, lower slope areas adjacent to the roads and the major ridgetop areas of this tract were open farmland in the 1930-60's. Overtime, the agricultural operations of this farm diminished and hillsides left to naturally regenerate or were planted to White Pine. The conifer plantings took place throughout the 1980's as part of the Mead Free Tree Program. The young hardwood areas are developing well, and many of these areas are fully stocked with desirable commercial tree species and patches of Ailanthus trees and Autumn Olive/Privet. Unfortunately, Ash trees were a significant part of the stand composition in certain woodlots on this farm and the woods have been impacted by EAB. Timber stand improvement (TSI) management practices, such as, grapevine control and elimination of non-native invasive species of woody shrubs & trees will certainly enhance the quality and value of your timber resources. Over time, these important tasks will allow you to maximize the health of the trees in your woodland. If this work in not completed the non-native invasive species will overrun the woodlots and open field areas.

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.

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.

Please note all habitats do not 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

does not 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. Open lands, such as the agricultural fields that are grass/broadleaf plant covered, are providing the additional feeding opportunities & nesting sites. They are currently being rotationally mowed in late Fall. Areas of thick understory in various woodlots benefit both game & non-game species of mammals and birds. The conifer plantations provide a great habitat diversity. Finally, the ponds are an important ecological asset for a variety of amphibian, fish, reptiles, and insect species (Stand 8).

Best Management Practices – maintaining the integrity and productivity of woodland sites: The roads and trails are in good shape and erosion is minimal. This tract has several driveways off or the public roads for access. The driveway off Wallbrown road is going to be reworked.

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.

The only issue with the mowed paths and trails on this tract is several are heavily infested with Japanese Stiltgrass and it is spreading into adjacent forestlands.

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.

Stand 4 forms part of the headwaters of an un-named intermittent stream. Stand 8 covers 3 farm ponds. The largest of the ponds is located on the west side of Grim Road, along with a small pond located in the pines. The third small pond is in Stand 11, on the east side of Grim Rd. These water resources are a year-round benefit to a wide variety of wildlife species. They also provide opportunities for a variety of recreational activities.

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

There are no certified wetlands located on this tract identified in the National Wetlands Inventory Database, only the identified, un-named intermittent streams and the 3 farm ponds. See attached map.

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.

- 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.

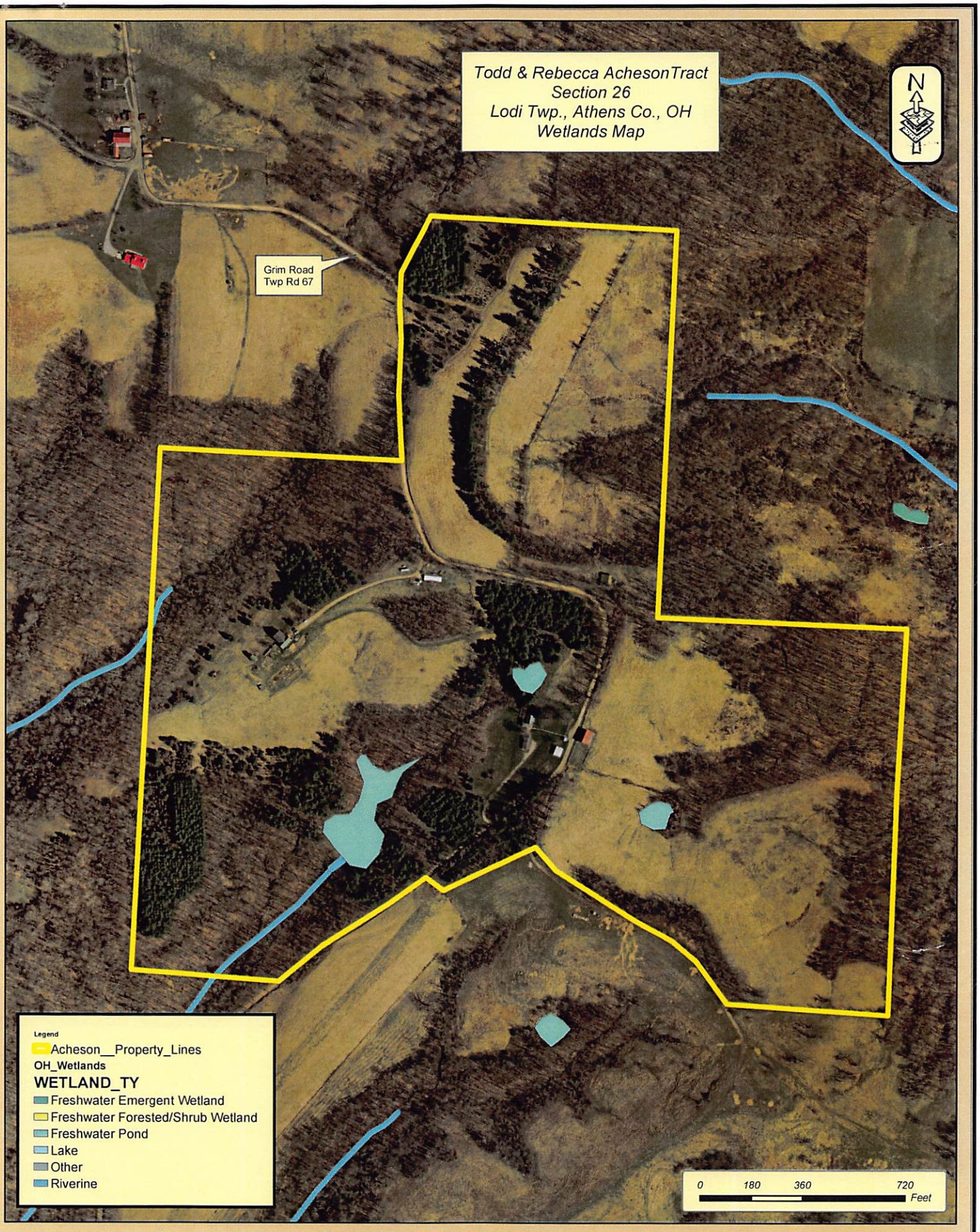
There's another important point to keep in mind. Most Forests of Recognized Importance in the U.S. that are globally, nationally or regionally significant have already been identified and protected by state or federal government or have been put under a conservation easement by an environmental nonprofit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

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.

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, but this tract is of family importance.



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Cartography By: Dean A Berry

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 could 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 some 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.

Woodlots are used for hiking, hunting and other 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.

This farm is bisected by a township road, so maintaining the integrity of the wooded landscape is an important aspect of the landowner's long-term objectives.

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.

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.

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.

Forest Health – a general description of the health of the woodland: Most of the forest areas are in acceptable condition, considering the historical use of this area. The majority of the forested areas are the result of natural succession, upon abandonment from the agricultural use. EAB has impacted all the forested areas of this tract. Non-native invasive plants, like Autumn Olive, Privet, Japanese Stiltgrass and Barberry in particular, are becoming well established in areas & spreading.

Some problematic insect pests or diseases were noted during the woodland review (White Pine Aldegid). This woodland shows good overall health and vigor in regards to tree growth. 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 intial 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 miamaiga..."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 eggs 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 and killed the Ash tres.**

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

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. Medicinal shrubs and herbs and maple syrup are more examples of other beneficial forest resources. Plantings of native forest plants in various location on the farm is being planned.

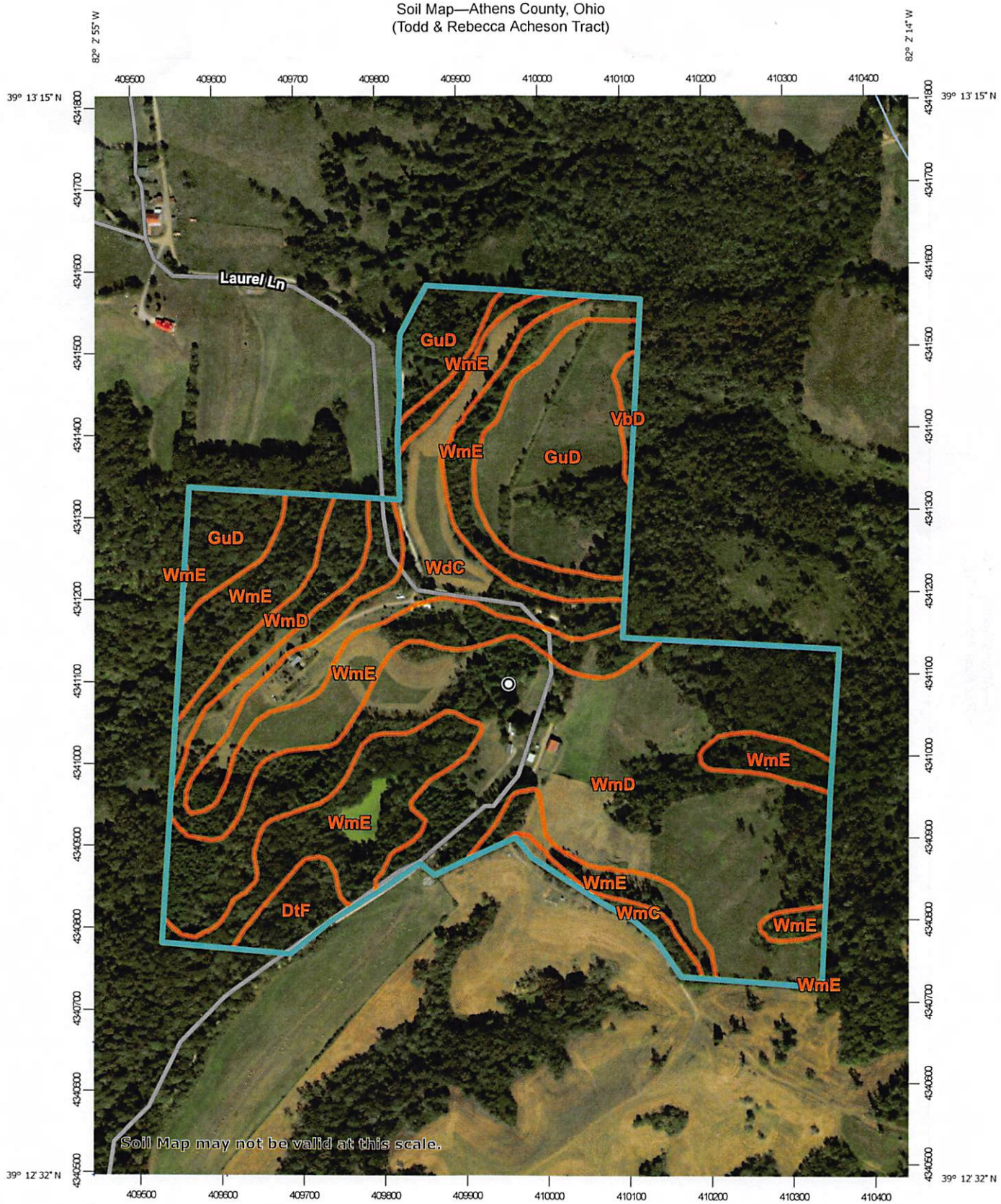
Addendums

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

Landowner Plan packet also contains:

- How to mark your property lines
- Forestry Terms
- How to treat grapevines.
- Autumn Olive Fact Sheet
- Ailanthus Fact Sheet
- Privet Fact Sheet
- Barberry Fact Sheet
- Bush Honeysuckle Fact Sheet
- Japanese Stiltgrass Fact Sheet
- White Pine Adelgid Fact Sheet

Soil Map—Athens County, Ohio
(Todd & Rebecca Acheson Tract)



Map Scale: 1:6,430 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

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 21, Sep 16, 2019

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

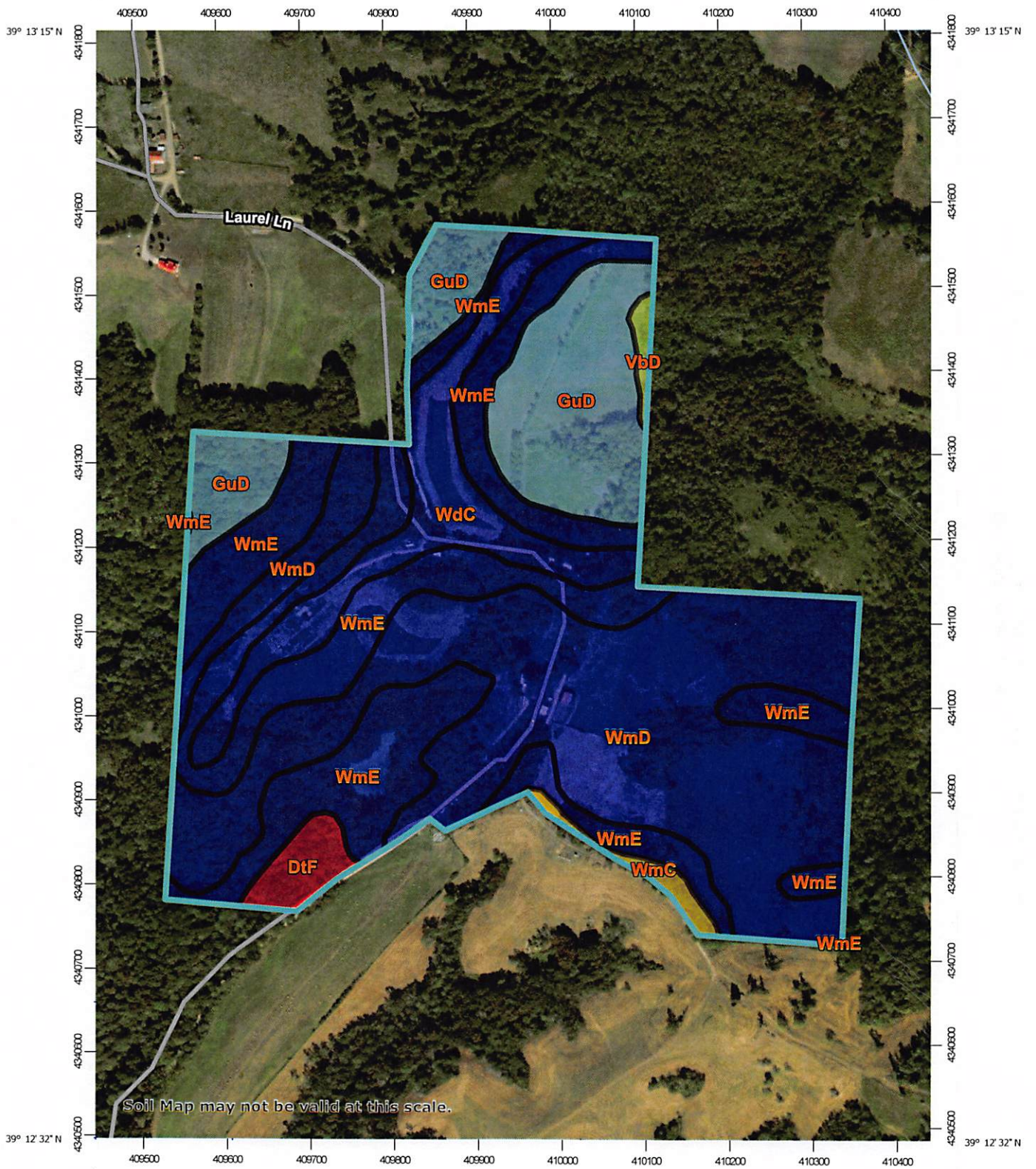
Date(s) aerial images were photographed: Sep 17, 2015—Mar 26, 2017

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
DtF	Dekalb-Westmoreland complex, 40 to 70 percent slopes	2.2	2.0%
GuD	Guernsey-Upshur complex, 15 to 25 percent slopes	17.3	15.6%
VbD	Vandalia-Brookside complex, 15 to 25 percent slopes	0.6	0.6%
WdC	Wellston silt loam, 8 to 15 percent slopes	10.6	9.6%
WmC	Westmoreland-Upshur complex, 8 to 15 percent slopes	1.1	1.0%
WmD	Westmoreland-Upshur complex, 15 to 25 percent slopes	44.5	40.3%
WmE	Westmoreland-Upshur complex, 25 to 40 percent slopes	34.0	30.8%
Totals for Area of Interest		**110.4**	**100.0%**

Forest Productivity (Tree Site Index): northern red oak (Schnur 1937 (820))—Athens County, Ohio
(Todd & Rebecca Acheson Tract)



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N

Meters: 0 50 100 200 300

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 <= 75
- > 75 and <= 77
- > 77 and <= 78
- > 78 and <= 81
- Not rated or not available

Soil Rating Lines
- <= 62
- > 62 and <= 75
- > 75 and <= 77
- > 77 and <= 78
- > 78 and <= 81
- Not rated or not available

Soil Rating Points
- <= 62
- > 62 and <= 75
- > 75 and <= 77
- > 77 and <= 78
- > 78 and <= 81
- 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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Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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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
DtF	Dekalb-Westmoreland complex, 40 to 70 percent slopes	62	2.2	2.0%
GuD	Guernsey-Upshur complex, 15 to 25 percent slopes	78	17.3	15.6%
VbD	Vandalia-Brookside complex, 15 to 25 percent slopes	77	0.6	0.6%
WdC	Wellston silt loam, 8 to 15 percent slopes	81	10.6	9.6%
WmC	Westmoreland-Upshur complex, 8 to 15 percent slopes	75	1.1	1.0%
WmD	Westmoreland-Upshur complex, 15 to 25 percent slopes	81	44.5	40.3%
WmE	Westmoreland-Upshur complex, 25 to 40 percent slopes	81	34.0	30.8%
Totals for Area of Interest			**110.4**	**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	
			Cu ft/ac/yr	
DtF—Dekalb-Westmoreland complex, 40 to 70 percent slopes				
Dekalb	Northern red oak	62	29.00	Black oak, Eastern white pine, Red pine, Tuliptree, Virginia pine, White ash
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	
GuD—Guernsey-Upshur complex, 15 to 25 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	90	172.00	Eastern white pine, Tuliptree, Virginia pine, White ash
	Northern red oak	70	57.00	
	Tuliptree	90	86.00	
	Virginia pine	70	114.00	
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	—	—	
WdC—Wellston silt loam, 8 to 15 percent slopes				
Wellston	Northern red oak	81	57.00	Black walnut, Eastern white pine, Northern red oak, Tuliptree, White ash, White oak
	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	
WmC—Westmoreland-Upshur complex, 8 to 15 percent slopes				
Westmoreland	Eastern white pine	70	129.00	Black walnut, Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Northern red oak	75	57.00	
	Tuliptree	85	86.00	
Upshur	Eastern white pine	80	143.00	Austrian pine, Eastern white pine, Tuliptree, Virginia pine
	Northern red oak	65	43.00	
	Tuliptree	80	72.00	
	Virginia pine	66	100.00	
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	
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 21, Sep 16, 2019