

Woodland Stewardship Management Plan

Owner's Information:

Case Number: _____

Owner: Redbud Holdings, LTD.

Signed: 
David Funk_ Owner

Date: August 10, 2017

RECEIVED

OCT 26 2017

Jill Thompson
Athens County Auditor

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

Date: July 26th, 2017
Field Inspection Date

740-541-4647 mobile
fatlabtreefarm@gmail.com

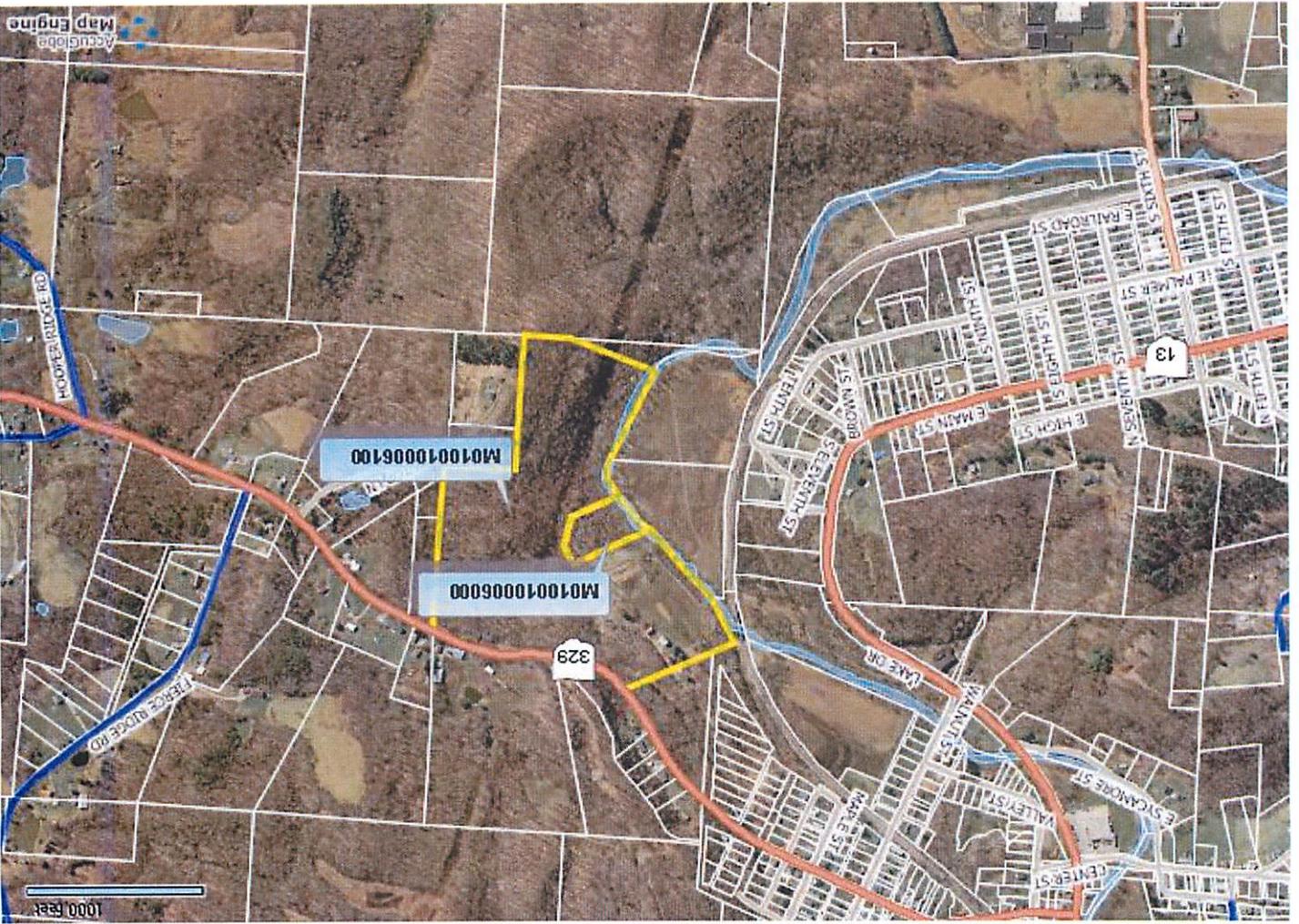
This plan is valid for the period beginning August 10th, 2017 and ending August 9th, 2027.

Plan Status:New

NRCS Representative Signature: _____

Date: _____

Athens County GIS



Notes

Redbud Holdings Ltd.
(David Funk)



Data For Parcel M010010006100

Base Data

Parcel: M010010006100
Owner: REDBUD HOLDINGS LTD
Address: 19355 S R 329



[+] Map this property.

Mailing Address

Mailing Name: REDBUD HOLDINGS LTD
Address: PO BOX 186
City State Zip: ATHENS OH 45701

Geographic

City: UNINCORPORATED
Township: TRIMBLE TOWNSHIP
School District: TRIMBLE LOCAL SCHOOL DISTRICT

Legal

Neighborhood:	00020000	Legal Acres:	41.159
Legal Description:	SEC 2 41.159A	Land Use:	(101) A - CASH GRAIN OR GENERAL FARM
		Property Class:	AGRICULTURAL
Map Number:	0-0-0-0	Range Township Section:	0-0-0

Valuation

	Appraised	Assessed (35%)
Land Value:	\$77,750.00	\$27,210.00
Building Value:	\$86,470.00	\$30,260.00
Total Value:	\$164,220.00	\$57,470.00
CAUV Value:	\$0.00	
Taxable Value:	\$57,470.00	

Tax Credits

Owner Occupancy Credit: NO
Homestead Reduction: NO

Notes

Notes:

Data For Parcel M010010006000

Base Data

Parcel: M010010006000
Owner: REDBUD HOLDINGS LTD
Address: 0 S R 329



[+] Map this property.

Mailing Address

Mailing Name: REDBUD HOLDINGS LTD
Address: PO BOX 186
City State Zip: ATHENS OH 45701

Geographic

City: UNINCORPORATED
Township: TRIMBLE TOWNSHIP
School District: TRIMBLE LOCAL SCHOOL DISTRICT

Legal

Neighborhood:	00020000	Legal Acres:	2.23
Legal Description:	14-11-00 SEC 2 2.230A	Land Use:	(501) R - RESIDENTIAL, 0-9.999 AC
		Property Class:	RESIDENTIAL
Map Number:	0-0-0-0	Range Township Section:	0-0-0

Valuation

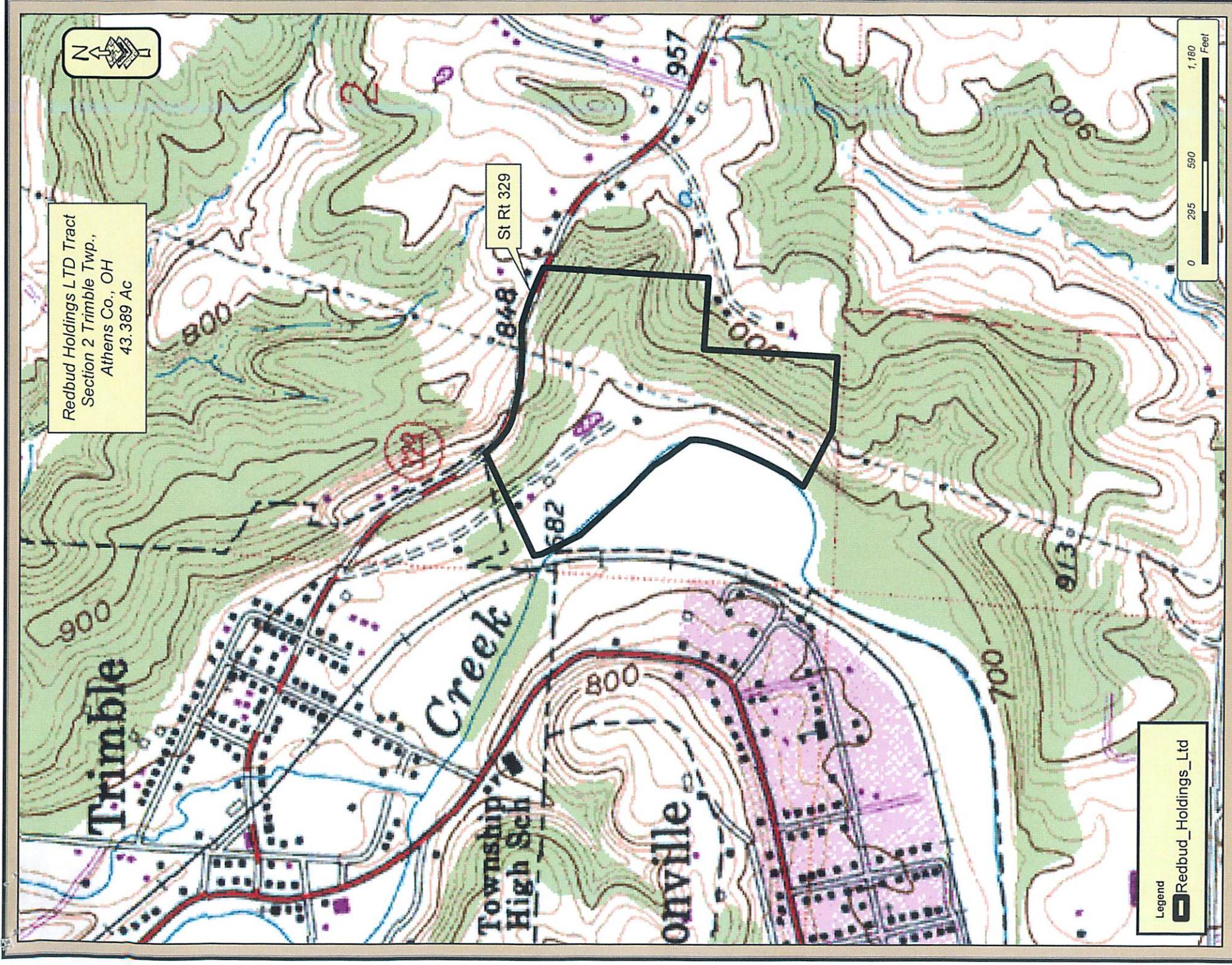
	Appraised	Assessed (35%)
Land Value:	\$6,410.00	\$2,240.00
Building Value:	\$0.00	\$0.00
Total Value:	\$6,410.00	\$2,240.00
CAUV Value:	\$0.00	
Taxable Value:	\$2,240.00	

Tax Credits

Owner Occupancy Credit: NO
Homestead Reduction: NO

Notes

Notes:



Redbud Holdings LTD Tract
Section 2 Trimble Twp.,
Athens Co., OH
43.389 Ac

St Rt 329

Legend
Redbud_Holdings_Ltd

0 295 590 1,180 Feet

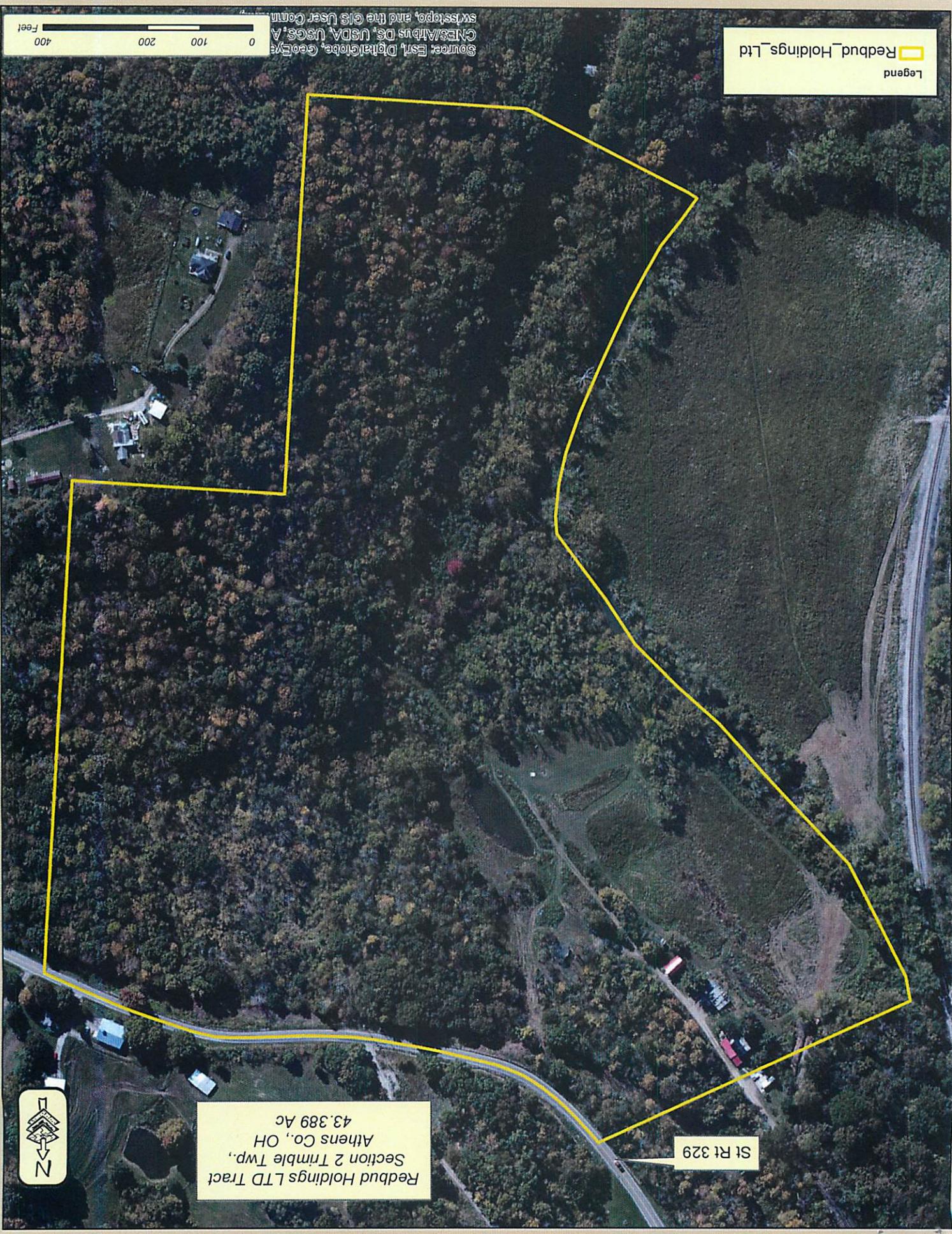
Legend
Redbud_Holdings_Ltd

Source: Esri, DigitalGlobe, GeoEye, GNA/AT&T, USDA, USGS, Aerial, and the GIS User Community

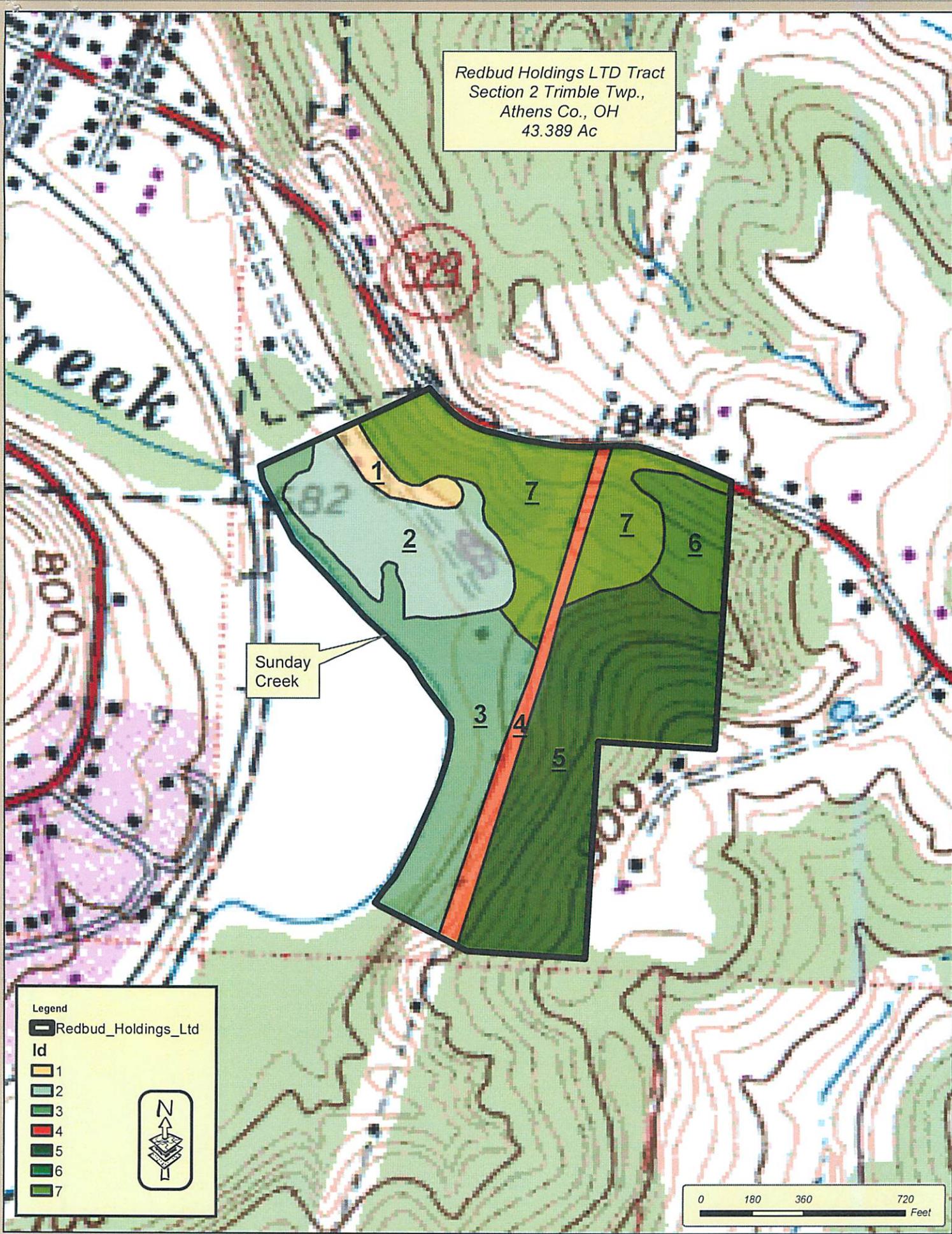
0 100 200 400 Feet

Redbud Holdings LTD Tract
Section 2 Trimble Twp.,
Athens Co., OH
43.389 Ac

St Rt 329



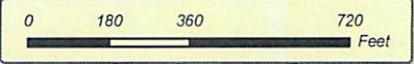
Redbud Holdings LTD Tract
Section 2 Trimble Twp.,
Athens Co., OH
43.389 Ac



Sunday
Creek

Legend

- Redbud_Holdings_Ltd
- Id
- 1
- 2
- 3
- 4
- 5
- 6
- 7





Legend

- 7
- 6
- 5
- 4
- 3
- 2
- 1
- Redbud_Holdings_Ltd

North Arrow

Redbud Holdings LTD Tract
 Section 2 Trimble Twp.,
 Athens Co., OH
 43.389 Ac

ST Rte
 329

Sunday
 Creek

0 110 220 440
 Feet

Source: Esri, DigitalGlobe, GeoEye,
 CNES/Airbus DS, USDA, USGS, A
 swisstopo, and the GIS User Comm

Woodland Stand Description and Management Recommendations

Stand # 1 - 1.0 acres Non-Forested Area_ Residential Areas

Dominant Species: NA

Forest Type or Dominant Vegetation: N/A

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: N/A

Topography: Gently sloping

Invasive plants or insects impacting this stand: Autumn Olive, Ailanthus, Japanese Honeysuckle, along edges (addressed in adjacent stand descriptions). Japanese Knotweed along driveway. A Paulownia trees near parking area.

Stand Description: This stand includes the residential areas (two rental houses). Associated outbuildings & barns, yard space and driveway are included in this stand. The residential area is semi-wooded with a variety of trees & shrubs.

Past management activities completed in this stand: New tenants are cleaning up area, mowing and completing general maintenance. Landowner is planning driveway improvements.

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

Is a timber harvest recommended? N/A

Comments: The edges of this area will be a persistent “problem area” for the landowner, in regards to non-native invasive plants to become established in.

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Woodland Stand Description and Management Recommendations

Stand #2 - 6.2 acres Non-Forested Area - fallow agricultural field

Dominant Species: grasses and broadleaf plants__scattered clumps of saplings – Black Willow, Sycamore, Silver Maple, Box Elder & a few Black Walnut

Forest Type or Dominant Vegetation: NA

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: No Prior Management, old agricultural field

Topography: Nearly level

Invasive plants or insects impacting this stand: Autumn Olive scattered along field edges.

Stand Description: This stand is the bottomland hay field located adjacent to Sunday Creek. Because of lack of activity, this area is beginning to regenerated with non-desirable tree species. Part of this area may be developed in pasture land for livestock. A small pond is included in this area. If this area is not going to be mowed at least annually, all or parts of this area should be planted to desirable trees.

SEE PLANTING RECOMMENDATIONS BELOW

Past management activities completed in this stand: Again, this tract recently acquired & landowner has not begun improvements on this field yet.

<i>Management Recommendations:</i>
Eradicate Autumn Olive along the edges of field before planting area
Plant area to appropriate desirable tree species – EQIP / CRP project

Comments: Work on eradicating the clumps of Autumn Olive located along the edges of the field if area is to be planted to trees and not going to be annually mowed or area will become infested with this invasive plant.

Planting recommendations developed by ODNR DOF Service Forestry

Summer prior to planting: mow a strip at least 3 - 4 feet wide where each row of trees will be planted.

September prior to planting: Spray glyphosate herbicide in a strip 3-4 feet wide where each row of trees will be planted in the rows that were mowed in the summer. (Mow these strips in your field as low as possible, and then spray) **I would recommend you also apply a treatment of OUST or a similar herbicide for pre-emergent control.**

Autumn prior to planting: order recommended number of seedlings of each recommended species. (Suggest –Black Walnut, Swamp White Oak, Red Oak)

March: plant recommended seedlings at recommended spacing. (I recommend a 8' X 8' spacing– 680 trees/acre or a maximum of 8' X 10' spacing – the 10' being the width between rows 544 trees/ac.

Each summer for 1 to 3 years after planting: mow between each row of seedlings or apply herbicide around seedling to control competing grasses. **Note –do not damage seedling stem by weedeating or scraping the seedling with the mower. This will damage the tree and cause a permeant defect in the tree.**

Each March for 1 to 3 years after planting: plant replacement seedlings as necessary to maintain at least 300 trees per acre.

Desired Future Conditions: Develop this fallow land into a quality forest by planting trees

Desired Forest Type or Dominant Vegetation: Bottomland Hardwoods - better drained site

Desired Stand Structure: Even Aged

Woodland Stand Description and Management Recommendations

Stand # 3 - 8.0 acres

Dominant Species: Box Elder, Sycamore, Silver Maple, Black Walnut, Red Maple, American Elm, Black Willow, White Ash, a few Oak spp., Hickories and Sugar Maple trees in the area near the powerline r/w

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: All size classes with the larger trees scattered along the stream bank. Mainly sapling/ poles sized trees with a few small sawlog sized trees in area near powerline.

Stocking Level: Fully stocked in most areas, but not with desirable species

Stand History: Unknown

Topography: Nearly level

Invasive plants or insects impacting this stand: EAB, Autumn Olive, scattered grapevines are the major issues, some Bush Honeysuckle, Barberry, Privet identified

Stand Description: This is a catch-all area – narrow strip of ground that follows the western boundary of this tract that includes the river and stream bank areas. Trees species present are mainly bottomland hardwood species, because this is a flood prone area. The part of this stand adjacent to the powerline is a drier site and is populated with more Maples, some Oaks, Hickories and Black Cherry trees.

Past management activities completed in this stand: new property owner, property lines located and marked with signage.

<i>Management Recommendations:</i>
Cut grapevines from all crop trees in this area
Work on eradicating the Autumn Olive from areas adjacent to Stand 2

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

Comments:

Sunday Creek is an important asset to this ownership. In addition, the continuous water source enhances the overall quality of this farm, and is very beneficial to both the game and non-game species of reptiles, fish, mammals and birds occupying the adjacent lands.

A Streamside Management Zone (SMZ) is a forested strip or area next to a creek or stream that is managed with specific attention to instream and downstream water protection. SMZ's should be maintained around both intermittent and perennial streams, lakes, ponds, naturally flowing springs, and reservoirs. Forest management activities within an SMZ should

leave the forest floor essentially undisturbed with minimum soil exposure. Mechanical site preparation, logging decks, skid trails, and firelanes are restricted within an SMZ. Similarly, roads should not be constructed within an SMZ, except at designated crossings (see Stream Crossing Alternatives below). Roads should cross the stream at a right angle. Drainage structures such as wing ditches, water bars, and cross drain culverts should vent their runoff before they enter the SMZ.

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

Desired Future Conditions: Maintain this area as an uneven aged bottomland hardwood stand.

Desired Forest Type or Dominant Vegetation: Bottomland Hardwoods - better drained site

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.

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

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

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

Desired Future Conditions: Let area develop into a hardwood forest again, lower slope area should produce quality Walnut trees.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 4 - 2.2 acres Non-Forested Area_ Powerline R/W

Dominant Species: NA

Forest Type or Dominant Vegetation: N/A

Stand Diameter or Size Class: N/A

Stocking Level: N/A

Stand History: N/A

Topography: Nearly level

Invasive plants or insects impacting this stand: Autumn Olive, Bush Honeysuckle, Barberry along edges (addressed in adjacent stand descriptions)

Stand Description: This stand covers the powerline r/w, which bisects center of this farm.

Past management activities completed in this stand: N/A

<i>Management Recommendations:</i>
Annually inspect for invasive species and work on the eradication of any found

Is a timber harvest recommended? N/A

Comments: The edges of this area will be a persistent “problem areas” for the landowner, in regards to non-native invasive plants becoming established in.

Desired Future Conditions:

Desired Forest Type or Dominant Vegetation:

Desired Stand Structure:

Woodland Stand Description and Management Recommendations

Stand # 5 - 13.6 acres

Dominant Species: Sugar Maple, Black Oak, Yellow Poplar, Ash, Red Maple, Black Cherry, Sycamore, Black Walnut, Am. Elm, Hickories, Am. Beech, Yellow Buckeye, Hornbeam

Forest Type or Dominant Vegetation: Upland Central Hardwoods

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

Stocking Level: Fully stocked

Stand History: Unknown

Topography: Gently sloping with some steep slope/flat bench areas

Invasive plants or insects impacting this stand: Scattered Grapevines in stand, EAB, several Ailanthus patches identified

Stand Description: Compared to adjacent Stand 3, this area has adequate stocking of trees that provide some crown closure, reducing the amount of reproduction and invasive shrubs in the understory. Area is composed of steep side slopes and flat bench areas. Trees are well developed and healthy. The limited amount of Ash trees in stand composition is showing EAB mortality. Quality Sugar Maple trees in this area. This area contains the majority of Oak trees on this tract.

Past management activities completed in this stand: property lines located and marked with signage

<i>Management Recommendations:</i>
Eradicate the scattered Ailanthus trees in this area asap
Cut grapevines from this area, cover entire stand (approx. 1/2 area has vines). Patches of medium vine infestations but overall mainly light populations.
Work on the non-native invasive species – treating Autumn Olive/Barberry/Bush Honeysuckle as time permits.

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

Comments: This area just needs to develop more. Stocking of desirable species varies throughout this area. Lower slope area has a fair amount of Black Walnut in stand composition. Cut the grapevines & eradicate Ailanthus are the only issues in this stand at this time.

Desired Future Conditions: This area should produce quality hardwood sawtimber in the future.

Desired Forest Type or Dominant Vegetation: Upland Central Hardwoods

Desired Stand Structure: Uneven Aged

Woodland Stand Description and Management Recommendations

Stand # 6 - 2.6 acres

Dominant Species: Ash, Red Maple, Sugar Maple, Black Cherry, Am. Elm, Black Walnut, Yellow Buckeye, Sassafras, Hawthorn, Autumn Olive, Paw Paw, a scattering of Oak pole trees

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Poletimber/Small sawtimber

Stocking Level: Fully stocked with desirable species

Stand History: No Prior Management

Topography: Gently sloping, to steep_middle/upper slope area

Invasive plants or insects impacting this stand: EAB, Autumn Olive, Barberry, Bush Honeysuckle, multi flora rose, grapevines

Stand Description: This upper slope area was open land and then abandoned. Again, this is a composite area of natural late successional development of woody shrubs and trees. Ash trees showing EAB mortality. Thick understory because of the semi-open canopy. Grapevines have not been treated in this area yet. Area is similar to Stand 5 in species composition and size class of these but not as evenly stocked and a more open crown structure. This is a transition area from the well-developed St 5 to the brushy, younger St 7 area.

Past management activities completed in this stand: Again, this stand was recently acquired & landowner has not begun improvements on this area yet. Property lines located and marked with signage.

<i>Management Recommendations:</i>
If seeking EQIP Project funding – Cut all grapevines from this area and begin treatment of the non-native invasive woody shrubs & vines that were identified in this area.
Work on the non-native invasive species – treating Autumn Olive/Barberry/Bush Honeysuckle as time permits.
A minimal intensity activity that would benefit this area greatly would be to cut the grapevines from “crop” trees (Walnut, Oak spp., Sugar Maples, Poplar) in this area

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

Comments: This area will continue to naturally develop into forestland again.

Desired Future Conditions: Again, this area will develop in the future with TSI work. Work to create a fully stocked stand of desirable trees

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

Woodland Stand Description and Management Recommendations

Stand # 7 - 9.8 acres

Dominant Species: Yellow Buckeye, Sassafras, Ash, Red Maple, Dogwood, Black Cherry, American Elm, Spice Bush, Paw Paw, Sycamore-- scattered Black Walnut, Red Oak, White Oak, Tulip Poplar

Forest Type or Dominant Vegetation: Upland Central Hardwoods

Stand Diameter or Size Class: Sapling/Poletimber scattered larger trees on steeper slope areas

Stocking Level: Fully stocked in most areas

Stand History: Old-Field Reversion

Topography: Gently sloping, to steep slopes and flat benches _side slope area

Invasive plants or insects impacting this stand: grapevines in stand, EAB, Autumn Olive & Multi Flora Rose, Japanese Honeysuckle, Barberry, Bush Honeysuckle

Stand Description: This area covers the entire northern portion of this tract. This area had been open land and reverted back into forestland – late successional stage of development. Part of this area is heavy briars and brush that is difficult to traverse. Patches of pole trees are beginning to have crown closure, with a more open understory and a more advanced stand development. Overall, grapevines are present throughout the entire stand.

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

<i>Management Recommendations:</i>
If seeking EQIP Project funding – Cut all grapevines from this area and begin treatment of the non-native invasive woody shrubs & vines that were identified in this area.
A minimal intensity activity that would benefit this area greatly would be to cut the grapevines from “crop” trees (Walnut, Oak spp., Sugar Maples, Poplar) in this area
Continue work on eradication of Autumn Olive/ Bush Honeysuckle as time permits

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

Comments: EAB present in the Ash trees in this area. Nice scattering of Black Walnut trees in this area. Non-native invasive species in this area is almost beyond control, at least work on eradicating the grapevines in the “crop” trees. Let this area develop for this 10 year management period.

Recommended Management Activity Schedule

Year(s) Suggested	Mgmt. Unit	Required Task?	EQIP Practice?	Acres	Recommendations
2022, 2027	All	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA	Inspect & remark any portions of property lines with paint and signs necessary to help prevent illegal trespass. This task must be completed before this farm is eligible for enrolment into either OFTL or CAUV property tax reduction programs.
2018 -2023	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6 + total of vines ½ ac Ail.	Cut all grapevines from this area, cover entire stand because of scattered vines. Eradicate the identified Ailanthus patches in this area. Do follow up inspections and any additional remedial work as needed.
2018 -2027	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4-5ac	Site prep and plant all or parts of this field to trees. In addition, cut and treat the non-native invasive species along the field edge to eliminate seed source and planting site contamination.
2022 -2027	6 & 7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12ac	Work on cutting grapevines from trees in these areas – cover entire stand. This work could be done in conjunction with other TSI activities: Non-native woody shrub eradication if applying as an EQIP Project. Minimal activities in these areas should be cutting the grapevines from all potential “crop” trees
2022 & 2027	Whole Property	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Next Site Visit – Woodland reviews are recommended at least once every five years, and no more than ten years, based upon the date of the last actual woodland evaluation conducted by your forester	

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

Redbud Holdings LTD Tract
 Section 2 Trimble Twp.,
 Athens Co., OH
 43.389 Ac
 Activity Map

ST 7 cover entire area
 cutting all grapevine out of at least "crop" trees
 Treat invasives as time permits

ST 6 cover entire area
 cutting all grapevine out of crop trees
 work on invasive species identified

ST 2
 possible future tree planting area
 Site prep & plant recommended species
 treat Autumn Olive along field edge

Ailanthus
 Trees

ST 5 cover entire area
 cutting all grapevine
 eradicate Ailanthus

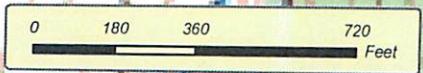
Ailanthus
 Trees

Legend

Redbud_Holdings_Ltd

Id

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Woodland Resource Descriptions

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

Soil Type(s): BrC, BrD, Chg1AF, FaD, FbE, GuD, WhE, WkF

Soil Drainage Class: Moderately well drained to well drained

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

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

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

Site Class: (using Woodland Productivity): Good _ Species Used - Northern Red Oak rating

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

Short term timber production potential is limited for this property because the majority of the stands are young and just beginning to mature. The woodlands are stocked with a variety of marketable timber species that will produce valuable wood products in the future. Timber stand improvement (TSI) management practices such as grapevine control cull tree & undesirable hardwood species 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, and are important tasks to implement in order to maximize the timber production potential in your woodlands. Emerald Ash Bore is causing damage to the forested areas throughout the farm.

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 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 don't mind

The diversified size class of trees & shrubs of the forested land on this tract provides suitable habitat for a variety of game and non-game species of birds and animals. Openings, such as the bottomland field, access roads, powerline right-of-ways that are grass covered are providing the additional feeding & nesting sites. Areas of thick understory benefit both game & non-game species of mammals and birds. The pond area is an important ecological asset for a variety of amphibian species, reptiles, fish and insects.

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

There are no areas identified in the National Wetlands Inventory Database, except for a freshwater pond and the perennial stream that forms the western property line. Review was completed 7/27/2017.

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.

Sunday Creek, a perennial stream, forms the Western boundaries of this ownership. A small man-made small pond is located in Stand 2, near the cabin area.

Best Management Practices – maintaining the integrity and productivity of woodland sites: As bad as the last harvest was (in regards to tree selection), the logger did construct water bars and seeded the log roads during sale closeout. Trails are in good shape and erosion is minimal.

Basic protection measures used to guard your forest soils against problems related to soil/site limitations and equipment usage - rutting, excessive disturbance and compaction, erosion, and sedimentation. - are commonly referred to as Best Management Practices (BMP'S). One very easy BMP landowners may use is simply to limit heavy equipment access to dry weather periods.

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

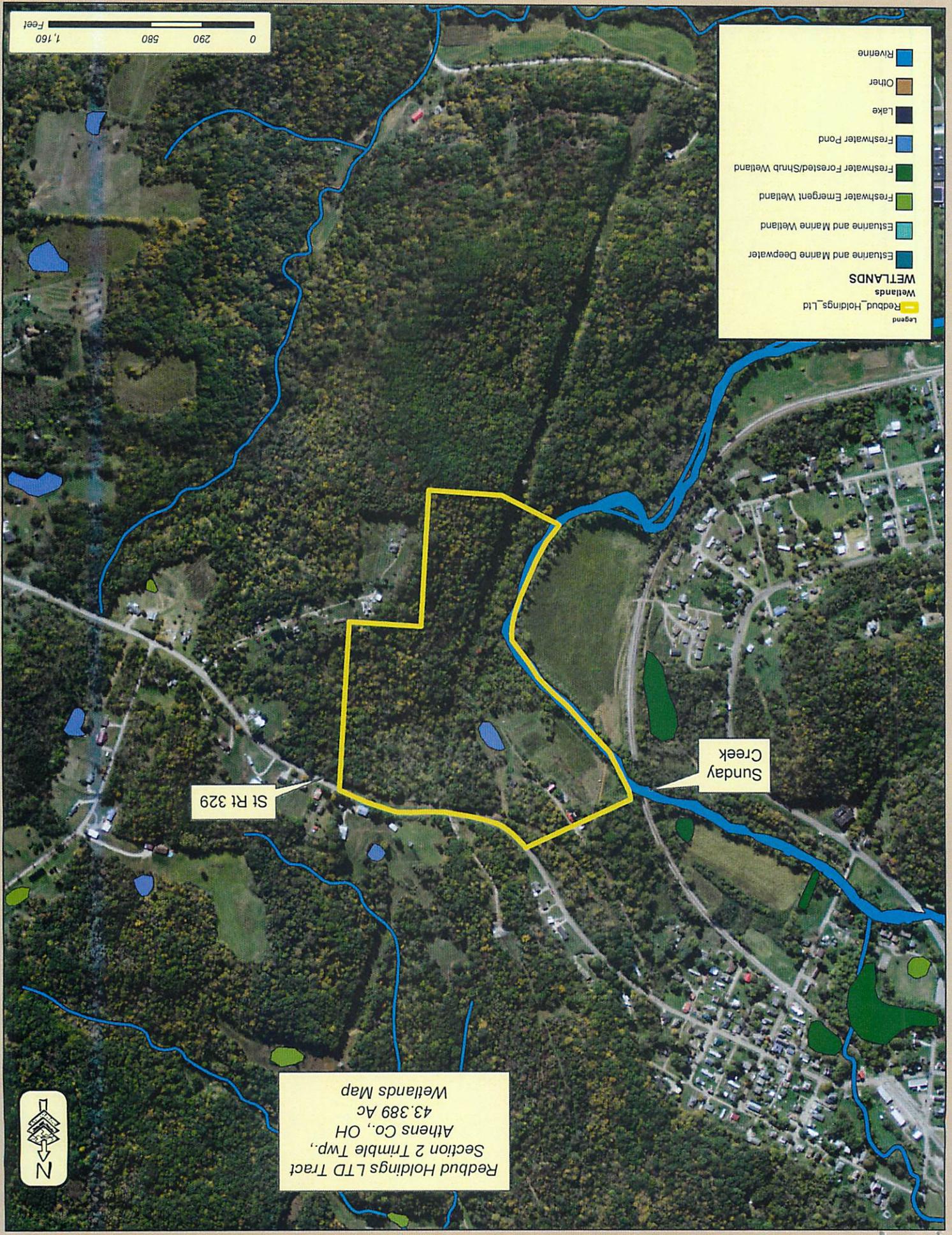
During timber harvest activities, follow the Best Management Practices outlined in the Ohio State University Bulletin #916 – BMPs for Erosion Control for Logging Practices in Ohio. This booklet is available online at www.ohiodnr.gov/forestry/ or at your local Division of Forestry office.

Practically speaking, the use of BMP's to prevent soil loss is a sound agricultural practice that helps maintain site & timber productivity. Also, implementing BMP's helps you comply with Ohio's Agricultural Pollution Abatement Law (HB 88) standards for Silvicultural Operations. There is not an issue with any of the trails and roads on this tract.

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

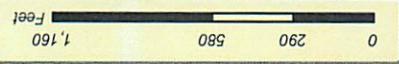
Historical and cultural resources are nonrenewable and can never be replaced once destroyed. These resources provide us a unique glimpse into the past and a look at the people and how they cared for the land. Good stewardship involves recognizing these resources and protecting them. These resources should 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 unique sites on this tract. 7/27/2017



Legend

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



St Rt 329

Sunday Creek

Redbud Holdings LTD Tract
 Section 2 Trimble Twp.,
 Athens Co., OH
 43.389 Ac
 Wetlands 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 located in a unique landscape classification. 7/27/2017

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.

Creating hiking/equine trails will improve access and your opportunities for the use of the area. A walk/ride in the forest provides a time of learning for all, but it can also be a time to relax and observe the natural settings. The woodlands can be a quiet place of solitude after a busy workday, or anytime for that matter.

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.

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 tract is located within the viewscape of the Village of Trimble and is adjacent to St Rte. 329, so maintaining the visual appearance of a natural forest landscape is important to the landowner.

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 wild flowers 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 honey bees and butterflies are examples of beneficial insects. Medicinal shrubs and herbs and maple syrup are more examples of other beneficial forest resources.

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 forests sequester carbon. Forest landowners that hold an interest or focus upon the carbon cycle have opportunities to enhance carbon sequestration on the property by conducting various silvicultural practices that enhance the forest's ability to sequester carbon, and by re-establishing woodlands on non-forested land.

Active forest managers may find opportunities for carbon trading and participation in ecosystem service markets.

Forest Health – a general description of the health of the woodland: Most of the forest areas are in acceptable condition, considering the lack of actual forest management that had been done by the previous Owners. The majority of the forested areas are the result of natural succession, upon abandonment from an agricultural use. EAB is beginning to have a significant impact on the forested areas of this tract. Non-native invasive plants: Autumn Olive, Bush Honeysuckle & Ailanthus in particular, are spreading throughout portions of this farm.

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*

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).

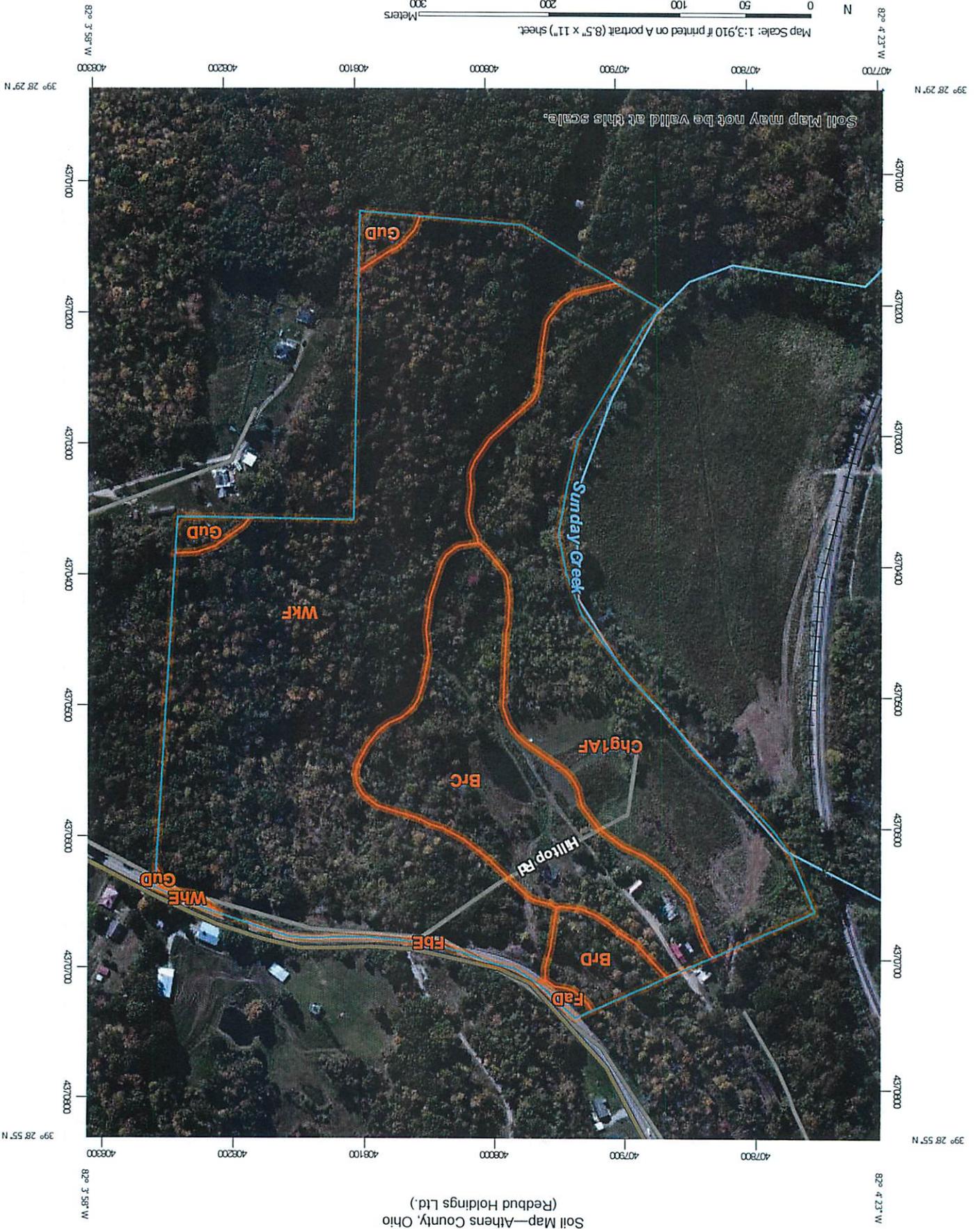
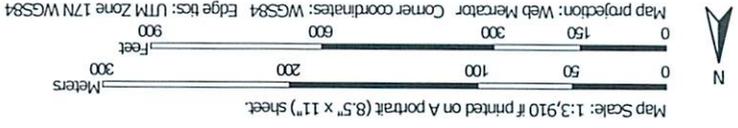
A list of common forestry terms is included in the addendum of this plan.

Addendums

- Soils Report with - Soil Map and Map Unit Description
- Forest Productivity (northern red oak Site Index)
- Black Walnut Suitability Index
- Forest Productivity Report

Landowner Plan packet also contains:

- How to mark your property lines
- Forestry Terms
- Autumn Olive Fact Sheet
- Ailanthus Fact Sheet
- Bush Honeysuckle Fact Sheet
- Japanese Knotweed Fact Sheet
- How to cut grapevines
- Tree Planting handout



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 17, Sep 16, 2016

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

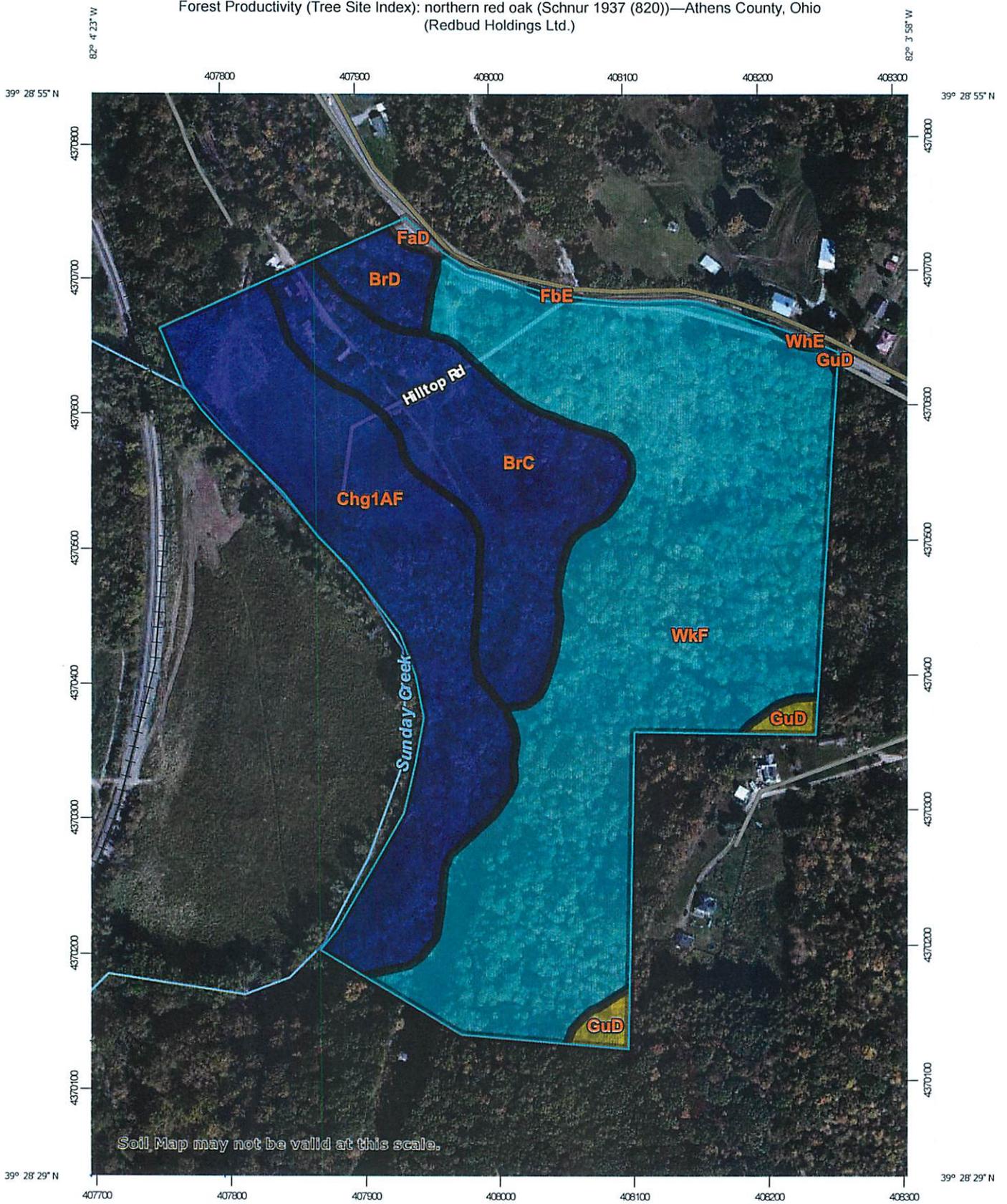
Date(s) aerial images were photographed: Oct 6, 2011—Oct 7, 2011

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Map Unit Legend

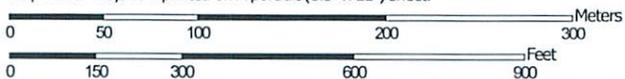
Athens County, Ohio (OH009)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BrC	Brookside silt loam, 8 to 15 percent slopes	7.3	17.0%
BrD	Brookside silt loam, 15 to 25 percent slopes	1.1	2.5%
Chg1AF	Chagrín silt loam, 0 to 3 percent slopes, frequently flooded	10.4	24.1%
FaD	Fairpoint silt loam, 8 to 25 percent slopes	0.1	0.3%
FbE	Fairpoint shaly clay loam, 25 to 40 percent slopes	0.0	0.0%
GuD	Guernsey-Upshur complex, 15 to 25 percent slopes	0.6	1.4%
WhE	Westmoreland-Guernsey silt loams, 25 to 40 percent slopes	0.0	0.1%
WkF	Westmoreland-Guernsey silt loams, benched, 40 to 70 percent slopes	23.5	54.6%
Totals for Area of Interest		43.0	100.0%

Forest Productivity (Tree Site Index): northern red oak (Schnur 1937 (820))—Athens County, Ohio
(Redbud Holdings Ltd.)



Soil Map may not be valid at this scale.

Map Scale: 1:3,910 if printed on A portrait (8.5" x 11") sheet.



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

MAP LEGEND

Area of Interest (AOI)

-  Area of Interest (AOI)

Soils

Soil Rating Polygons

-  <= 75
-  > 75 and <= 78
-  > 78 and <= 81
-  > 81 and <= 86
-  Not rated or not available

Soil Rating Lines

-  <= 75
-  > 75 and <= 78
-  > 78 and <= 81
-  > 81 and <= 86
-  Not rated or not available

Soil Rating Points

-  <= 75
-  > 75 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.

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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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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 17, Sep 16, 2016

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

Date(s) aerial images were photographed: Oct 6, 2011—Oct 7, 2011

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

Forest Productivity (Tree Site Index): northern red oak (Schnur 1937 (820))

Forest Productivity (Tree Site Index): northern red oak (Schnur 1937 (820))— Summary by Map Unit — Athens County, Ohio (OH009)				
Map unit symbol	Map unit name	Rating (feet)	Acres in AOI	Percent of AOI
BrC	Brookside silt loam, 8 to 15 percent slopes	86	7.3	17.0%
BrD	Brookside silt loam, 15 to 25 percent slopes	86	1.1	2.5%
Chg1AF	Chagrin silt loam, 0 to 3 percent slopes, frequently flooded	86	10.4	24.1%
FaD	Fairpoint silt loam, 8 to 25 percent slopes		0.1	0.3%
FbE	Fairpoint shaly clay loam, 25 to 40 percent slopes	75	0.0	0.0%
GuD	Guernsey-Upshur complex, 15 to 25 percent slopes	78	0.6	1.4%
WhE	Westmoreland-Guernsey silt loams, 25 to 40 percent slopes	81	0.0	0.1%
WkF	Westmoreland-Guernsey silt loams, benched, 40 to 70 percent slopes	81	23.5	54.6%
Totals for Area of Interest			43.0	100.0%

Description

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

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

Rating Options

Units of Measure: feet

Tree: northern red oak

Site Index Base: Schnur 1937 (820)

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Forestland Productivity

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

Potential productivity of merchantable or common trees on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forestland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

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

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

Reference:

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

Report—Forestland Productivity

Forestland Productivity—Athens County, Ohio				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			<i>Cu ft/ac</i>	
BrC—Brookside silt loam, 8 to 15 percent slopes				
Brookside	Northern red oak	86	72.00	Northern red oak, Tuliptree
	Tuliptree	96	100.00	
BrD—Brookside silt loam, 15 to 25 percent slopes				
Brookside	Northern red oak	86	72.00	Northern red oak, Tuliptree
	Tuliptree	96	100.00	

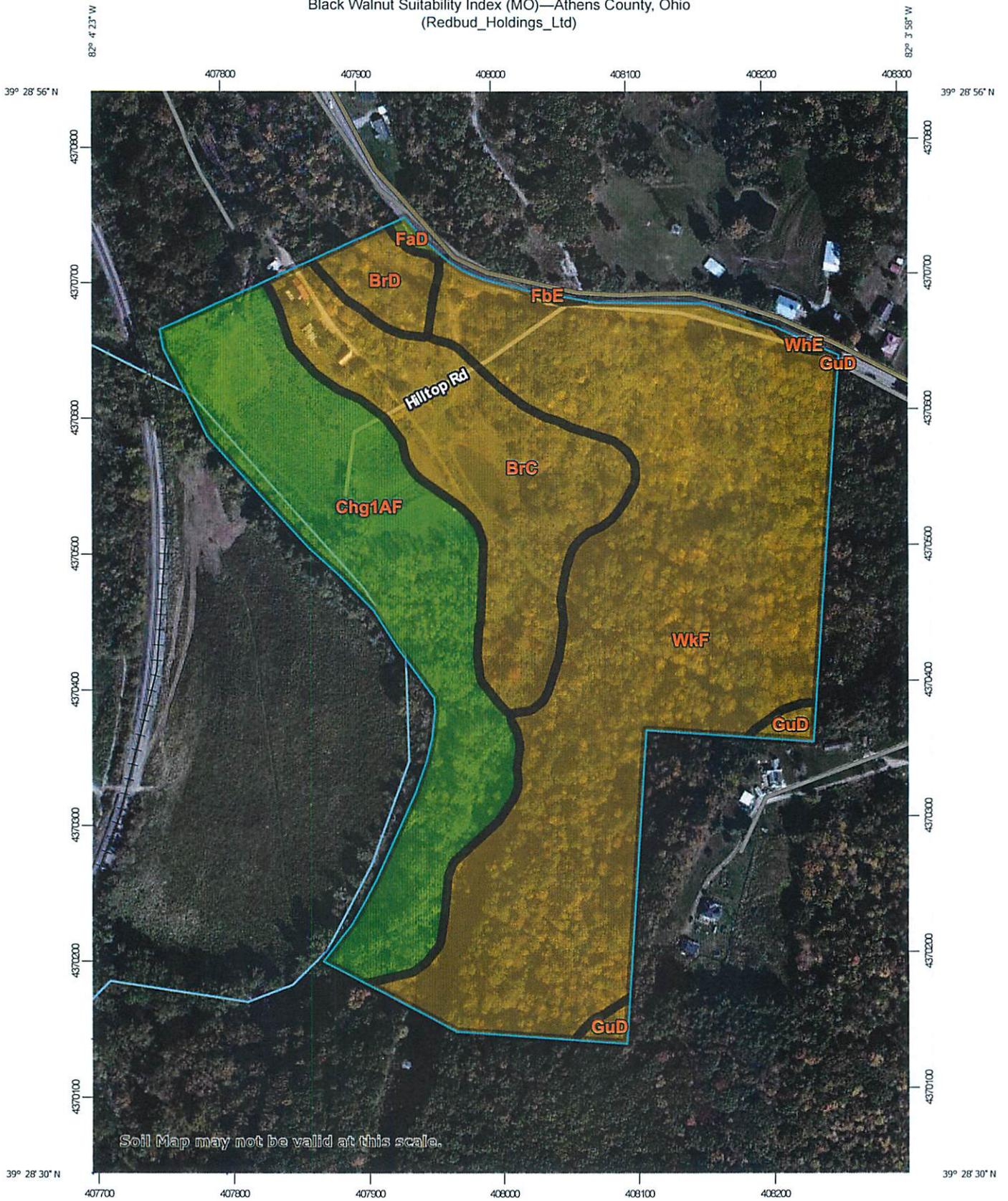
Forestland Productivity--Athens County, Ohio				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			<i>Cu ft/ac</i>	
Chg1AF—Chagrin silt loam, 0 to 3 percent slopes, frequently flooded				
Chagrin	Black cherry	—	—	Black walnut, Eastern white pine, Northern red oak, Red pine, Tuliptree, White ash, White oak
	Black walnut	—	—	
	Northern red oak	86	72.00	
	Sugar maple	86	57.00	
	Tuliptree	96	100.00	
	White ash	—	—	
	White oak	—	—	
FaD—Fairpoint silt loam, 8 to 25 percent slopes				
Fairpoint	—	—	—	Black locust, Blue spruce, Eastern white pine, Norway spruce, Scotch pine, White spruce, Yellow-poplar
FbE—Fairpoint shaly clay loam, 25 to 40 percent slopes				
Fairpoint	Black cherry	—	—	Black locust, Blue spruce, Eastern white pine, Northern red oak, Norway spruce, Scotch pine, Tuliptree, White ash, White spruce
	Black locust	59	—	
	Northern red oak	75	57.00	
	Red maple	—	—	
	Tuliptree	85	86.00	
	White ash	74	72.00	
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	

Forestland Productivity--Athens County, Ohio				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			<i>Cu ft/ac</i>	
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	—	—	

Data Source Information

Soil Survey Area: Athens County, Ohio
 Survey Area Data: Version 17, Sep 16, 2016

Black Walnut Suitability Index (MO)—Athens County, Ohio
(Redbud_Holdings_Ltd)



Map Scale: 1:3,890 if printed on A portrait (8.5" x 11") sheet.



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



MAP LEGEND

Area of Interest (AOI)		 Not rated or not available
 Area of Interest (AOI)		
Soils		Water Features
Soil Rating Polygons		 Streams and Canals
 Unsuitd		Transportation
 Poorly suited		 Rails
 Somewhat suited		 Interstate Highways
 Moderately suited		 US Routes
 Well suited		 Major Roads
 Very well suited		 Local Roads
 Not rated or not available		Background
		 Aerial Photography
Soil Rating Lines		
 Unsuitd		
 Poorly suited		
 Somewhat suited		
 Moderately suited		
 Well suited		
 Very well suited		
 Not rated or not available		
Soil Rating Points		
 Unsuitd		
 Poorly suited		
 Somewhat suited		
 Moderately suited		
 Well suited		
 Very well suited		

MAP INFORMATION

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Black Walnut Suitability Index (MO)

Black Walnut Suitability Index (MO)— Summary by Map Unit — Athens County, Ohio (OH009)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
BrC	Brookside silt loam, 8 to 15 percent slopes	Somewhat suited	Brookside (80%)	Flood Freq: None/Rare (0.00)	7.3	17.1%
				Native Veg: Prairie in uplands (0.00)		
				Texture: Poorly suited (0.45)		
				Available water capacity: 8-12" (0.73)		
				Watertable: 12-24" (0.73)		
BrD	Brookside silt loam, 15 to 25 percent slopes	Somewhat suited	Brookside (85%)	Flood Freq: None/Rare (0.00)	1.1	2.6%
				Native Veg: Prairie in uplands (0.00)		
				Texture: Poorly suited (0.45)		
				Available water capacity: 8-12" (0.73)		
				Watertable: 12-24" (0.73)		
Chg1AF	Chagrin silt loam, 0 to 3 percent slopes, frequently flooded	Well suited	Chagrin (95%)	Native Veg: Prairie in uplands (0.00)	10.8	25.2%
				Available water capacity: 8-12" (0.81)		
				Frgs: 0-8% (0.99)		
FaD	Fairpoint silt loam, 8 to 25 percent slopes	Moderately suited	Fairpoint (90%)	Flood Freq: None/Rare (0.00)	0.1	0.3%
				Native Veg: Prairie in uplands (0.00)		
				Landform: Shoulder/ Summit (0.25)		

Black Walnut Suitability Index (MO)— Summary by Map Unit — Athens County, Ohio (OH009)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Available water capacity: 3-8" (0.28)		
				Frag: 8-15% (0.42)		
FbE	Fairpoint shaly clay loam, 25 to 40 percent slopes	Somewhat suited	Fairpoint (90%)	Frag: >15% (0.00)	0.0	0.0%
				Flood Freq: None/Rare (0.00)		
				Native Veg: Prairie in uplands (0.00)		
				Available water capacity: 3-8" (0.20)		
				Landform: Backslope (0.50)		
GuD	Guernsey-Upshur complex, 15 to 25 percent slopes	Somewhat suited	Guernsey (50%)	Flood Freq: None/Rare (0.00)	0.4	1.0%
				Native Veg: Prairie in uplands (0.00)		
				Texture: Poorly suited (0.13)		
				Landform: Backslope (0.50)		
				pH limiting factor (0.54)		
			Upshur (30%)	Flood Freq: None/Rare (0.00)		
				Native Veg: Prairie in uplands (0.00)		
				Texture: Poorly suited (0.13)		
				Available water capacity: 3-8" (0.49)		
				Landform: Backslope (0.50)		
WhE	Westmoreland-Guernsey silt loams, 25 to	Somewhat suited	Westmoreland (50%)	Flood Freq: None/Rare (0.00)	0.0	0.1%

Black Walnut Suitability Index (MO)— Summary by Map Unit — Athens County, Ohio (OH009)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
	40 percent slopes			Native Veg: Prairie in uplands (0.00)		
Available water capacity: 3-8" (0.37)						
Landform: Backslope (0.50)						
pH limiting factor (0.54)						
Guernsey (35%)			Flood Freq: None/Rare (0.00)			
Native Veg: Prairie in uplands (0.00)						
Texture: Poorly suited (0.13)						
Available water capacity: 3-8" (0.49)						
Landform: Backslope (0.50)						
WkF	Westmoreland-Guernsey silt loams, benched, 40 to 70 percent slopes	Somewhat suited	Westmoreland (50%)	Flood Freq: None/Rare (0.00)	23.0	53.7%
Native Veg: Prairie in uplands (0.00)						
Available water capacity: 3-8" (0.38)						
Landform: Backslope (0.50)						
pH limiting factor (0.54)						
Guernsey (35%)			Flood Freq: None/Rare (0.00)			
Native Veg: Prairie in uplands (0.00)						
Texture: Poorly suited (0.13)						

Black Walnut Suitability Index (MO)— Summary by Map Unit — Athens County, Ohio (OH009)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Available water capacity: 3-8" (0.49)		
				Landform: Backslope (0.50)		
Totals for Area of Interest					42.9	100.0%

Black Walnut Suitability Index (MO)— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Somewhat suited	31.9	74.5%
Well suited	10.8	25.2%
Moderately suited	0.1	0.3%
Totals for Area of Interest	42.9	100.0%

Description

Proper site conditions are essential for suitable growth of black walnut (*Juglans nigra* L.) trees. Black Walnut Suitability Index ratings provide a method of rating Missouri soils based on their potential or suitability for black walnut growth.

The values for soil factors in the index are added together and then multiplied by critical factors to produce the final rating. Only factors listed under "rating reasons" are those adversely affecting the overall rating.

The calculated black walnut rating factor ranges from 0 to 1 with the higher values indicating better suitability. On the basis of these numeric values, the soils are grouped into suitability classes. These classes are identified as "unsuited," "poorly suited," "somewhat suited," "moderately suited," "well suited," and "very well suited."

The best suited soils for black walnut growth are very deep, moderately well drained or well drained, medium textured, slightly acid to slightly alkaline, have a high available water capacity, no rock fragments in the upper 24 inches, and are subject to brief or very brief flooding duration. Soils that are unsuited have a shallow effective rooting depth, a high water table (poor drainage), a low available water capacity, or are subject to flooding of very long duration.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen, which is displayed on the report. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the Selected Soil Interpretations report with this interpretation included from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Lower