Indiana Department of Natural Resources
Division of Forestry
DRAFT

RESOURCE MANAGEMENT GUIDE

State Forest: **Yellowwood** Compartment: **07** Tract: **15**
Tract Acreage: **52** Commercial Forest Acreage: **50**
Forester: **Amanda Smith (for Sean Sheldon)** Revised Date: **3/18/2013**

Location

Y0715 is located in Section 19 of Township 9N, Range 2E of Brown County. It is located approximately 0.1 miles north of Yellowwood Lake which is 5 miles west of Nashville, Indiana. The tract is accessible off of the northern end of Yellowwood Lake Road.

General Description

Y0715 consists of a total of 52 forested acres of which 22 acres are Oak-Hickory forest, 10 acres are of Mixed Hardwood forest, 4 acres are early successional regeneration areas, 8 acres are of Bottomland Hardwood Areas, and 8 acres are in Mixed Pine plantation areas, some of which are in modest stages of hardwood succession. 50 acres are considered commercial forest acreage with 2 acres currently being classified as a Riparian Management Area. The 42 mile Tecumseh Hiking Trail runs from the Yellowwood Lake headwaters through the central portion of the tract and out the Tract's NE corner. Overall, Y0715's timber resource ranges from small to large sawtimber in size. The timber quality of this tract is moderate to average. A summary of the forest resources in Y0715 in relation to species dominance is noted below in Table 1.

Table 1. Overview of Forest Resources in Y0715 in October 2012

Overstory Sawtimber Layer	Understory Poletimber Layer	Regeneration Layer
White Oak	Sugar Maple	American Beech
Shortleaf Pine	American Beech	Bluebeech
Black Oak	Black Walnut	Sugar Maple
Northern Red Oak	Pignut Hickory	Yellow Poplar
Yellow Poplar	Yellow Poplar	American Elm
Sugar Maple	American Elm	Red Maple
Black Cherry	Red Maple	Ironwood
Virginia Pine	White Oak	Blackgum
Scarlet Oak	Northern Red Oak	White Ash
Bitternut Hickory	White Ash	Flowering Dogwood
Pignut Hickory	Virginia Pine	Sassafras
American Sycamore	Eastern Redcedar	Black Cherry
American Beech	Largetooth Aspen	Pignut Hickory
Shagbark Hickory	Black Locust	Red Elm
Eastern White Pine	Blackgum	White Oak
White Ash	Shagbark Hickory	Eastern Redbud
Black Walnut	Shortleaf Pine	Largetooth Aspen
Largetooth Aspen	Bitternut Hickory	Shagbark Hickory
Chestnut Oak	Black Oak	*Bitternut Hickory
American Elm	Sassafras	*Black Oak
Eastern Redcedar		*Northern Red Oak
Red Maple		*Scarlet Oak
Sassafras		

* Species not captured in Prism Plots but present within the tract.

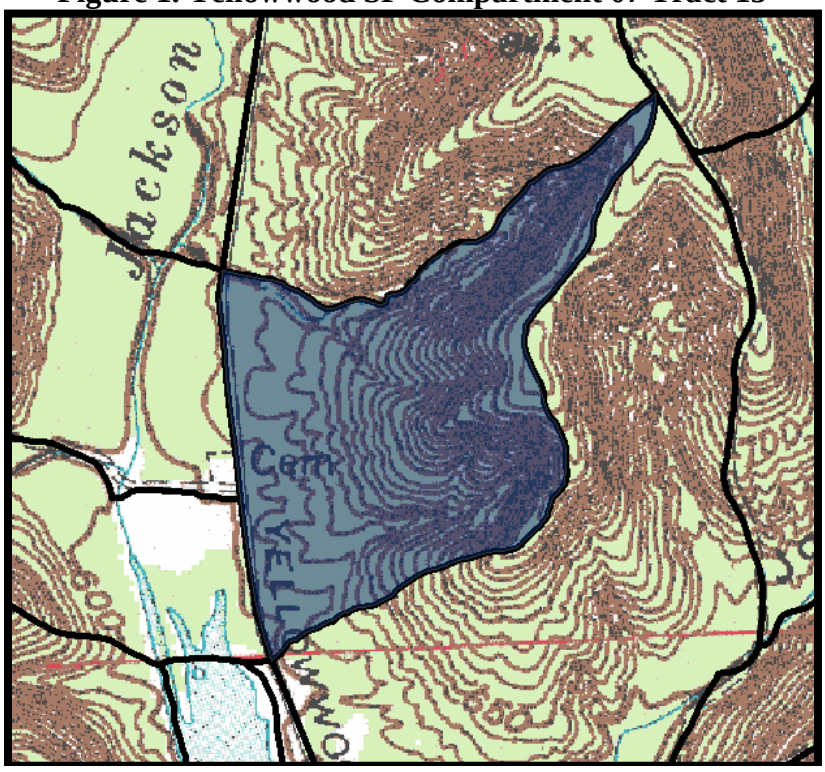
History

The land area that includes Y0715 (see Figure 1) was deeded to the State of Indiana in 1952 and 1953 by the United States Department of Agriculture. Historical aerial photography suggests that prior to government acquisition the valleys and ridgetops were farmed and the sideslopes likely to have been grazed. A timber sale occurred on a 42 acre portion of Tract 15 in 1965. This sale was marked by Foresters Gee, Willsey, and Waddell (2,520 BF/acre harvest sold to Charles Steele for $3,000). Forester Duncan conducted a visual examination of the tract in December of 1982 from Y0709. It was determined that a regeneration harvest was needed due to a large concentration of fire-damaged yet large diameter AMB on the north slope of Tract 15. Forester Duncan improved and widened the firetrail access into the tract on 1/12/1983. Forester Eckart conducted the first tract resource inventory on 9/5/1990. A management guide was drafted from this inventory by Eckart in January, 1994. Tract 15's proposed timber sale roadwork project was reviewed by the Division of Forestry Archeologist and cleared in September of 1992. Forester Eckart sold a combined tract (w/T18) timber sale on 8/17/1994 (successful bidder: Kelsie Pierce for $70,516.00 and an estimated 158,450 BF sold). The Tract was harvested from 8/23/1994 to 10/20/1994 by Kelsie Pierce's crew. A postharvest Timber Area Improvement (TSI) project was submitted for contracting by Forester Eckart on 11/15/1994. Tract 15's timber sale was audited on 2/5/1996 by Foresters Fischer, Duncan, Ernst, and Eckart. TSI on Tract 15 was completed on 2/28/1996 by a contracted forest consultant. The current and 2nd tract resource inventory was completed on October 1, 2012 by Intermittent Forester Amanda Smith. The results of that inventory are highlighted in the report below.

Landscape Context

The ridgetop and sideslopes of this tract are mostly comprised of the dominant Oak-Hickory species known to occur in the Yellowwood/Morgan-Monroe State Forest ecosystem. The western valley consists of Mixed Pine plantations intermixed with Mixed Hardwood species and of old-field Black Walnut plantations that are also intermixed with Mixed Hardwood species. The tract is completely surrounded by the dominantly closed forest canopy of Yellowwood State Forest with some maintained recreational openings and recreational buildings throughout the area. Yellowwood Lake lies approximately 0.1 miles south of the tract providing habitats for migrating waterfowl as well as woodland habitats for lowland mammals, herptiles, and birds.

Figure 1. Yellowwood SF Compartment 07 Tract 15



Topography, Geology and Hydrology

Tract 15 consists of predominantly west facing, drier to mesic slopes. The ephemeral drainages flow into Jackson Creek and eventually end in Yellowwood Lake. There is a mapped intermittent stream on the northern boundary of the tract that flows into Jackson Creek and then into Yellowwood Lake. In general, these upland soils were formed in residuum from sandstone, siltstone, and shale. The tract's topography ranges from 2-70% slopes with general west aspects.

Soils

BgF- Berks-Trevlac-Wellston Complex, 20 to 70 percent slopes

These moderately steep to very steep well drained soils are on hillsides in the uplands. They are fairly well suited to trees. Erosion hazards and equipment limitations are main management concerns due to slope. Consideration should be given during sale planning and implementation of Best Management Practices for Water Quality. This Complex has a site index of about 70 for northern Red Oak. This soil type occurs over 25.5 acres or about 10.6% of the tract.

PeB- Pekin Silt Loam, 2 to 6 percent slopes

This gently sloping, deep, moderately well drained soil is on alluvial terraces. It is well suited to trees and has a site index of 70 for White Oak and 85 for Yellow Poplar. This soil type occurs over 1.0 acre or about 1.9% of the tract.

PeC2- Pekin Silt Loam, 6 to 12 percent slopes, eroded

This moderately sloping, deep, well drained soil is found on sideslopes adjacent to drainage ways on alluvial terraces. It is well suited to trees and has a site index of 70 for White Oak and 85 for Yellow Poplar. This soil type occurs over 19 acres or about 36.5% of the tract.

WaD- Wellston-Berks-Trevlac Complex, 6 to 20 percent slopes
These moderately sloping to moderately steep, well drained soils are on sideslopes and narrow ridgetops in the uplands. They are well suited to trees. Seedling mortality can be an issue on south facing Berks soils due to droughty conditions. This Complex has a site index of about 70 for northern Red Oak. This soil type occurs over 5.5 acres or about 10.6% of the tract.

WeC2- Wellston-Gilpin silt loams, 6 to 20 percent slopes, eroded
These moderately sloping to moderately steep, well drained soils are on side slopes and ridgetops in the uplands. They are well suited to trees. This complex has a site index for northern red oak of 71 in the Wellston and 80 in the Gilpin. This soil type occurs over 1.0 acre or about 1.9% of the tract.

Access
Y0715 is directly accessible off of Yellowwood Lake Road. There is public parking across Yellowwood Lake Road at the Jackson Creek Cemetery and also at the head of the firetrail that runs along the southern and eastern boundaries of Tract 15. A proposed roadwork project for Tracts 12, 15 & 18 was submitted in December of 2012 and has had a field review by the Division archaeologist. The PHPA clearance for this project is pending and roadwork is planned to be completed in early CY2013.

Boundary
Y0715 does not have any private ownerships adjacent as it is bordered on all sides by other Yellowwood State Forest tracts. A firetrail runs along the south and east boundaries. The northern boundary is denoted by a large drainage that becomes a mapped intermittent stream. The western boundary runs along Yellowwood Lake Road.

Wildlife
A Heritage Database Review was completed for this tract. If rare threatened or endangered species were identified for this area, the activities prescribed in this guide will be conducted in a manner that will not threaten the viability of those species.
The Division of Forestry has instituted procedures for conducting forest resource inventories so that the documentation and analysis of critical live tree (legacy) and snag tree densities are examined on a tract basis in order to maintain the long-term and quality forest habitats.

The resource inventory was conducted during the early fall of 2012 so summer breeding bird residents had begun to migrate. Songbirds were heard and the following bird species were identified during the inventory:

American Crow	Downy Woodpecker	Redbellied Woodpecker
American Redstart	Gray Catbird	Red-tailed Hawk
Bluejay	Hairy Woodpecker	White-breasted Nuthatch
Canadian Geese	Pileated Woodpecker	Wild Turkey
Chirping Sparrow		

Other species or sign observed within the tract indicates use by Eastern Box Turtle, White-tailed Deer, Grey Squirrel, Eastern Chipmunk, Raccoon, Opossum, Coyote and other small mammals. Multiple deer trails were also noted throughout the tract. Tract 15 has an abundant supply of food resources such as soft and hard mast. The mapped intermittent stream that runs along part of the northern boundary of the tract provides an ephemeral water source for the area during seasonal and rainy periods throughout the year.

The Indiana Division of Forestry recognizes the potential to improve Indiana Bat habitat on its lands by implementing comprehensive management practices. These management practices include obtaining data on size, species, and numbers of snag trees (See Table 2). Snag trees and the presence of some specific species of trees are a vital part of the Indiana Bat policy as they provide prime roosting sites for maternal colonies. According to the Wildlife Habitat Feature Summary, all levels of snags and legacy trees met or exceeded maintenance levels except for snag trees in the 9"+ DBH class. A Timber Area Improvement (TSI) project following the completion of the proposed harvest should help reduce the snag deficiencies as selected interior forest trees will be deadened to increase snag abundance.

Management practices conducted on Y0715 will be conducted in a manner that will maintain the long-term and quality forest habitats for Indiana Bat populations.

Table 2. Live Legacy Trees* and Snags inventoried October 2012 on Y0715

	Maintenance Level	Optimal Level	Inventory	Available Above Maintenance	Available Above Optimal
Legacy Trees *					
11"+ DBH	468		1,872	1,404	
20"+ DBH	156		339	183	
Snags (all species)					
5"+ DBH	208	364	1,147	939	783
9"+ DBH	156	312	82	**-74**	**-230**
19"+ DBH	26	52	31	5	**-21**

*** Species Include:** AME, BIH, BLL, COT, GRA, REO, POO, REE, SHH, ZSH, SIM, SUM, WHA, WHO.

Communities

The ground cover of this tract consisted of mainly mesic to dry mesic species. Observed species included:

Appendaged Waterleaf	Greenbrier	Red Raspberry
Autumn Olive	Hawthorn	Sedge spp.
Black Snakeroot	Hazelnut	Sensitive Fern
Blackberry	Heart-leaved Aster	Spicebush
Blueberry	Japanese Barberry	Spinulose Wood Fern
Buttonbush	Japanese Honeysuckle	Short's Aster
Canada Violet	Japanese Stiltgrass	Spotted Ladysthumb
Christmas Fern	Jewelweed	Squawroot
Clayton's Bedstraw	Large-flowered Bellwort	Sticky Willy
Cleavers	Leeks	Stinging Nettle
Dittany	Maidenhair Fern	Sweet Cicely
False Mermaid	Maple-leafed Viburnum	Virginia Creeper
Giant Ragweed	Miterwort	White Snakeroot
Golden Ragwort	Multiflora Rose	Wild Ginger
Goldenrod	Oxalis spp.	Wild Strawberry

Gooseberry	Pawpaw	Witch Hazel
Grapevine	Poison Ivy	Wreath Goldenrod
Grass spp.		

Squawroot (Conopholis americana) is a plant that is parasitic on the roots of oak trees.

Exotic Species

Autumn Olive, Japanese Barberry, Japanese Honeysuckle, Japanese Stiltgrass, and Multiflora Rose were observed during the inventory along Yellowwood Lake Road, in the oldfield portions of the tract, around the log yard, and dispersed sporadically throughout the area. Populations of Autumn Olive, Japanese Barberry, and Japanese Honeysuckle should be treated as observed and reevaluated in the future. With multiple access routes into the tract, the eradication of the Japanese Stiltgrass is unlikely. However, the prompt reseeding of exposed surface roads and yarding areas during timber sale closeout can reduce the spread and extent of infestation of Stiltgrass. Multiflora Rose has become naturalized among the Brown County landscape, therefore, only large concentrations should be considered for treatment at this time, especially those that exist in planned regeneration openings.

Autumn Olive - *Elaeagnus umbellata*

Autumn olive is an invasive, exotic shrub found commonly in Indiana. Once commonly planted for wildlife benefits, it can overtake old fields and be persistent in forested settings. It creates dense thickets that crowd out native vegetation.

Japanese Barberry - *Berberis thunbergii*

Japanese Barberry was introduced to the U.S. in 1875 as an ornamental plant for hedgerows from Russia. It can form dense areas because it is shade tolerant, drought resistant, and seems to be avoided by White-tailed deer which gives it a competitive advantage. Once established, Japanese barberry alters soil pH, nitrogen levels, and biological activity in the soil. It displaces native plants and reduces wildlife habitat and forage availability.

Multiflora Rose - *Rosa multiflora*

Multiflora rose is an exotic shrub that was once planted widely as a "living fence" to confine livestock. It is extremely prolific and can form impenetrable thickets that exclude native plant species. If left to grow, it spreads throughout the understory of forested areas making it difficult for trees to regenerate.

Japanese Honeysuckle- *Lonicera japonica*

Japanese Honeysuckle is an invasive, exotic evergreen vine. It grows in dense clumps often strangling host plants and shading out native vegetation.

Japanese Stiltgrass- *Microstegium vimineum*

Japanese Stiltgrass is an invasive, exotic annual grass from Asia. It is an extremely prolific seed producer with each stem producing between 100 to 1,000 seeds every year. Seeds are easily spread by water, animals, and human disturbance. This species invades areas quickly and forms dense mats that crowd out native vegetation. Due to its nature, complete eradication is extremely difficult. However control methods can be successful at reducing the quantity of viable seed.

Old Growth and Representative Sample Area (RSA) Assessments

During the current resource inventory all portions of the tract were reviewed and evaluated for old growth potential as well as for Representative Sample Areas. A Representative Sample Area (RSA) is an ecologically viable representative example of a natural community that is designated

to establish and/or maintain an ecological reference condition, to create or maintain an under-represented ecological condition, or to serve as a refugia for species, communities, and community types. No representative areas of Type 1 or Type 2 Old Growth nor RSA's appear to exist within Y0715. An area should be considered for Type 1 Old Growth classification if it contains 3 or more acres of forest land that appear to have never been harvested or disturbed by man. An area should be considered for Type 2 Old Growth classification if it contains 20 or more acres that have not been logged in the last 80 years and shows developing old growth characteristics.

Recreation

Activities within this tract include hiking, bird watching, wildlife viewing, hunting, and mushrooming. The Tecumseh Hiking Trail runs east to west through the middle of Y0715 and then runs northeast along the eastern boundary of Tract 15. A small public parking area for public access is located at the head of the firetrail along Yellowwood Lake Road. A posting for restricted access, a trail reroute, or temporary closure of this portion of the Tecumseh Hiking Trail is proposed in the event of a future timber harvest for safety considerations as well as to reduce interaction with timber harvest and recreational values.

Cultural

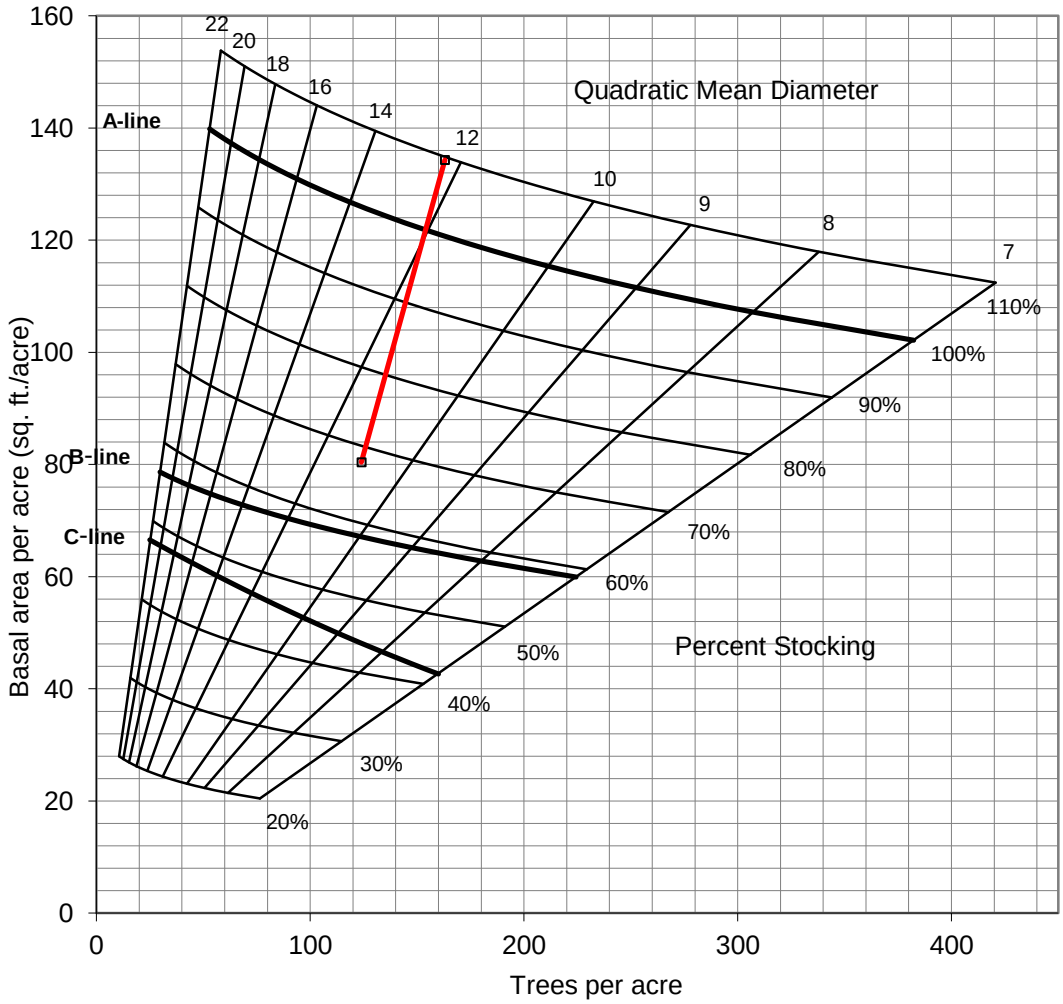
Cultural resources may be present on this tract, if present their location is protected. Adverse impacts to significant cultural resources noted will be avoided during any management or construction activities. There is a modern trash dump site along the firetrail shortly after entering the tract from Yellowwood Lake Road that is planned for cleanup in the Spring of 2013.

Tract Subdivision Description and Silvicultural Prescription

The overall stratum structure for this tract is represented in the following Gingrich Stratum and stock table that follows the individual stratum summary.

Tract Summary Data

Total Trees/Ac. = **864 Trees/Ac.**	Overall % Stocking = **110%** (Overstocked)
BA/A = **157.3 Sq. Ft./Ac.**	Sawtimber & Quality Trees/Ac. = **60 Trees/Ac.**
Present Volume = **5,686 Bd. Ft./Ac.**	Harvest Volume = **2,801 Bd. Ft./Ac.**
Residual Volume/Ac. = **2,885 Bd. Ft./Ac.**	



Summary Tract Silvicultural Prescription and Proposed Activities

The current forest resource inventory was completed on October 1, 2012 by Intermittent Forester Amanda Smith. 26 prism points were sampled over 52 acres (1 point for every 2.0 acres). A tract summary of the forest resource inventory is given above in and a species breakdown of the summary is given in Table 3 below. This tract is overstocked and would benefit from a timber harvest. A managed timber harvest over the entire tract could possibly yield 90 – 140 MBF. The tract's forest resource is composed of 5 different stratums based on the 4 major timber types and size classes mentioned below.

Oak-Hickory Stratum

As the Oak-Hickory component of the Eastern Hardwood Ecosystem provides the most significant wildlife, timber resource, and value the retention of these areas is important in the Property's longterm management program. The Oak-Hickory timber type covers roughly 42.3% of the tract or about 22 acres, however, roughly 0.7 acres of the Oak-Hickory timber type is located within 50 feet of an intermittent stream and will be managed as a Riparian Management Area. Therefore, the Oak-Hickory Management Stratum covers roughly 41% of the tract or 21.3 acres. The overstory is dominated by WHO, BLO, REO, and SUM with an average basal area of 154.5 square feet per acre.

Singletree and selection cuttings are prescribed to remove lower quality stems and mature to overmature trees to release a growing stock of high quality, more vigorous stems. Likewise, careful selection by free thinning of co-dominant stems will help to improve overall croptree spacing. Lower quality trees that include low-forking, leaning, overtopped/suppressed intermediates, epicormically sprouting, and deformed trees are planned to be marked for removal in an improvement cutting. Group selections could be prescribed to create regeneration openings where there is an abundance of advanced regeneration of oak and hickory seedlings or where the overstory has too low of stocking to carry the stratum into the next cutting cycle.

Mixed Hardwoods Stratum

The Mixed Hardwoods component of the Eastern Hardwoods Ecosystem can be very variable in their composition and thereby have more complicated prescriptions. The Mixed Hardwoods timber type covers roughly 19.2% of the tract or about 10 acres, however, roughly 0.5 acres of the Mixed Hardwoods are located within 50 feet of an intermittent stream and will be classified as a Riparian Management Area. Therefore, the Mixed Hardwoods Management Stratum covers roughly 18.3% of the tract or 9.5 acres. The overstory is dominated by YEP, BLC, REO, AMB, and SUM with an average basal area of 114.2 square feet per acre. Singletree and selection cuttings are also prescribed to remove lower quality stems and mature to overmature trees which will help to improve croptree spacing. An improvement cutting is prescribed to release the quality Oaks, Hickories and Walnuts from crown competition of lesser-valued timber species. The long-term result of these prescribed cuttings will increase timber diversity as well as enhance wildlife habitat as most of the species within the Mixed Hardwood component are not heavy mast producers nor tend to provide valuable timber resources. Improvement cuttings in this area will also be applied to remove low-forking, leaning, overtopped/suppressed intermediates, epicormically sprouting, and deformed trees. In order to meet our Property's International Forest Certification goals, group selections may be marked in appropriate areas to create regeneration openings. The Mixed Hardwood stratum is often where most of these goals are applied as they tend to have lower Oak-Hickory elements. Planned regeneration openings will most likely return to mixed hardwoods with a strong component of YEP. Overall, marking objectives within this component should consider Oak and other species of significant wildlife value as the best croptrees for future conservation. In CY2012 a fair amount of the tract's YEP appeared to be in modest decline as a result of the past three years of drought and the Tulip Poplar Scale insect infestation that occurred in the late spring of 2012. The affected YEP will need careful review when the tract is marked as modest mortality is expected. Sugar Maple borer damage was noted in understory SUM throughout both the Mixed Hardwoods stratum and the Oak-Hickory stratum. In time this pest girdles the bole of the tree that results in the stem breaking apart during moderate and severe windstorms. The removal of these stems would be classified as a combination improvement and sanitation cutting.

Bottomland Hardwood Stratums

This timber type covers roughly 15.4% of the tract or about 8 acres of Y0715, however, roughly 0.5 acres of the Bottomland Hardwood timber type is located within 50 feet of an intermittent stream and will be classified as a Riparian Management Area. Therefore, the Bottomland Hardwood Management Stratum covers roughly 14.4% of the tract or 7.5 acres. The overstory is dominated by SYC, SUM, BLW, BLC, and WHP with an average basal area of 107.6 square feet per acre. Timber quality of this area is low to moderate. Singletree and selection cuttings are prescribed to remove lower quality stems and mature to overmature trees to release a growing stock of high quality, more vigorous stems. Likewise, careful selection by free thinning of co-dominant stems will help to improve overall croptree spacing. Lower quality trees that include

low-forking, leaning, overtopped/suppressed intermediates, epicormically sprouting, and deformed trees are planned to be marked for removal in an improvement cutting. The marking of group selections would be appropriate to regenerate the low quality hardwoods and the WHP so that higher quality native hardwoods could replace those areas wherein preferred hardwood species seedlings have already become established. Areas where better quality hardwood poletimber have emerged and entered the area canopy should be prescribed croptree release TSI. Planned regeneration openings will most likely return to mixed hardwoods with a strong component of YEP, however, a presence of oak on the drier aspects is expected. Overall, marking objectives within this component should consider oaks, walnuts and other species of significant wildlife value as the best croptrees for future conservation. Quality and vigorous Pine may be retained as they provide significant wildlife habitat diversity and cover.

Early Successional Regeneration Stratums

Past harvest regeneration openings cover roughly 7.7% of the tract or about 4 acres, however, roughly 0.2 acres of the Early Successional Regeneration timber type is located within 50 feet of an intermittent stream and will be classified as a Riparian Management Areas. Therefore, the Early Successional Regeneration Stratums covers roughly 7.3% of the tract or 3.8 acres. These areas are dominated mostly by YEP, SAS, and LAA with an average basal area of 50.1 square feet per acre. The YEP regeneration appeared to be in modest decline as a result of the past two years of drought and the Tulip Poplar Scale insect infestation that occurred in the late spring of 2012. These affected YEP will be reviewed prior to the planned postharvest timber area improvement project as modest mortality is expected. All old regeneration openings should be scheduled for a croptree release and grapevine removal in the planned postharvest TSI project.

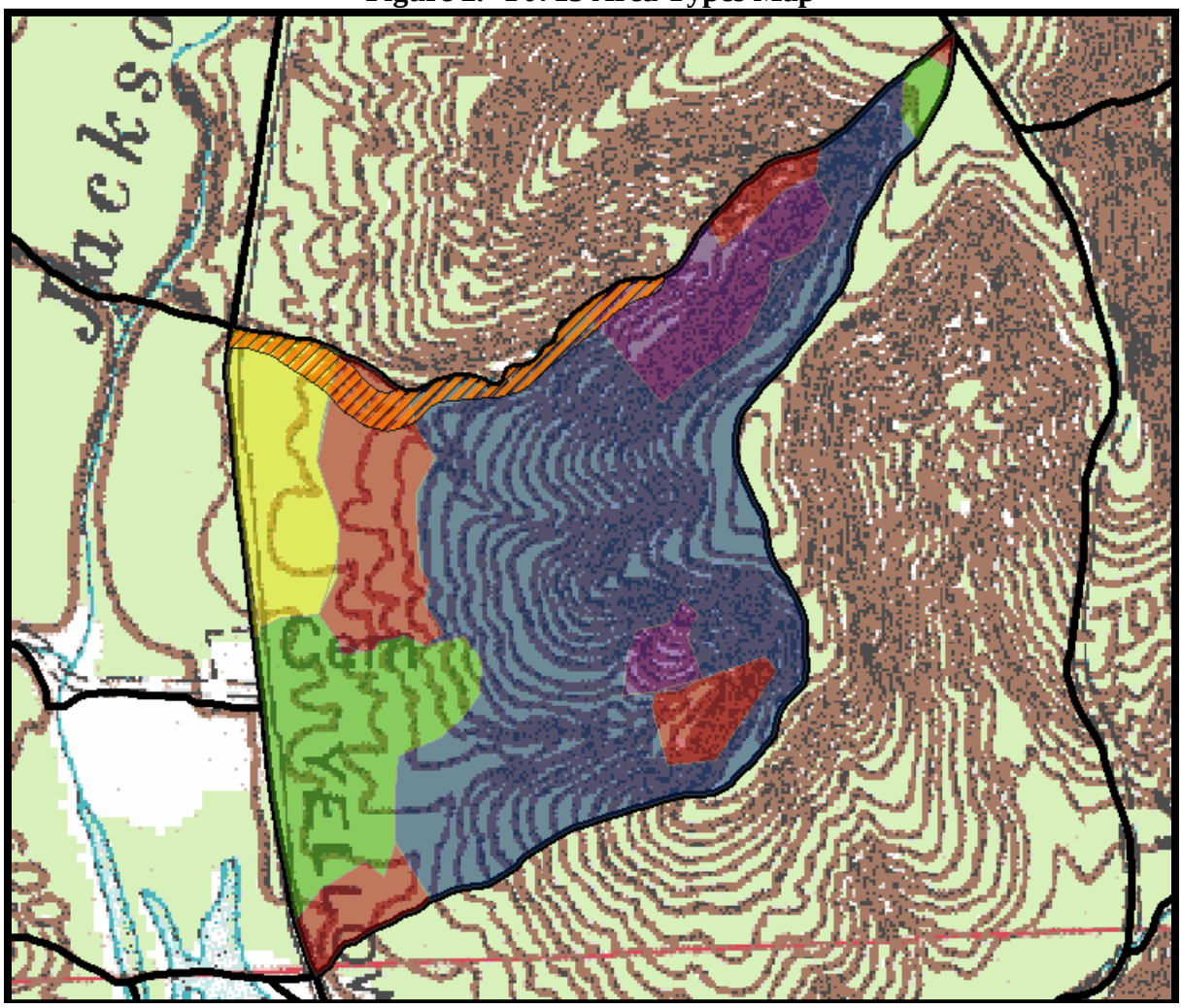
Riparian Management Area

The Riparian Management Area covers roughly 3.7% of the entire tract or about 1.9 acres. The overstory is dominated by SYC, BLW, WHO, and YEP with an average basal area of 120.6 square feet per acre. No active management activities will occur at this time. This area is designated as lying within 50 feet of either side of the intermittent stream (see Figure 2).

Mature Mixed Pine Plantation Areas

Virginia Pine, Shortleaf Pine, and White Pine were planted for erosion control purposes during the early management history of YSF. As these areas have matured and individual trees have declined native hardwoods have naturally succeeded and become established in the area's understory and canopy gaps. This timber type covers roughly 15.4% of the tract or about 8 acres of Y0715 with an average basal area of 133.5 square feet per acre. The overstory is dominated by VIP, SHP, and WHP with some YEP, BLO, and BLC intermixed. Group selections would be appropriate to regenerate the Pine into native hardwoods in those areas where seedling Oaks, Hickories and Yellow Poplar have become established. Planned regeneration openings will most likely return to mixed hardwoods with a strong component of YEP however a presence of oak on the drier aspects is expected. Areas where poletimber Oaks, Hickories and Yellow Poplar have emerged and entered the area canopy should be prescribed TSI for croptree release. Singletree selection is prescribed in quality VIP, SHP, and WHP areas for the removal of lower quality stems and to release occasional hardwoods that have good vigor. The enhancement of these Pine areas by releasing Oaks and Hickories is valuable in enhancing the Oak-Hickory component within this Area. Overall, marking objectives within this Area should consider oak and other species of significant wildlife value as the best croptrees for future conservation. Quality and vigorous Pine may be retained as they provide significant wildlife habitat diversity and cover.

Figure 2. Y0715 Area Types Map



Given the recent inventory, this tract is suitable for a 15 year cutting cycle wherein growth and development of the tract is reevaluated by a forest inventory every 15 years. During this management cycle it was determined to retain most of the pine areas for wildlife values and growth. Therefore, the current inventory indicates a harvest of between 50 - 100 MBF. A combined tract timber sale is proposed for this tract along with Tracts 12 & 18 in FY12-13. As Tracts 15 & Tract 18 share a common roadway and ridge it is proposed that Tract 18 be merged into Tract 15 following the proposed harvest to reduce entry periods as well as to reduce administrative costs.

Table 3. Overview of Sawtimber Volume Estimates in Y0715 in October of 2012

Species	Harvest	Leave	Total
White Oak	18,330	49,310	67,640
Shortleaf Pine	33,550	2,920	36,470
Black Oak	17,370	15,950	33,320
Northern Red Oak	11,020	12,990	24,010
Yellow Poplar	7,950	13,050	21,000
Sugar Maple	12,520	7,300	19,820
Black Cherry	4,870	8,770	13,640
Virginia Pine	9,390	690	10,080
Scarlet Oak	4,740	4,720	9,460
Bitternut Hickory	0	9,260	9,260
Pignut Hickory	4,160	4,900	9,060
American Sycamore	3,440	5,610	9,050
American Beech	3,510	2,550	6,060
Shagbark Hickory	0	5,150	5,150
Eastern White Pine	3,520	1,110	4,630
White Ash	2,960	1,370	4,330
Black Walnut	1,350	1,970	3,320
Largetooth Aspen	2,950	0	2,950
Chestnut Oak	1,870	770	2,640
American Elm	0	1,640	1,640
Eastern Redcedar	960	0	960
Red Maple	770	0	770
Sassafras	420	0	420
Tract Totals (Bd. Ft.)	**145,650**	**150,030**	**295,680**
Per Acre Totals (Bd. Ft./Ac.)	**2,801**	**2,885**	**5,686**

Proposed Activities Listing

Proposed Management Activity	***Proposed Period***
DHPA Timber Sale Roadwork Project	December 2012-Spring CY2013
Dumpsite cleanup	Spring CY2013
Roadwork Rehabilitation	Spring CY2013
Timber Marking 1	Spring CY2013
AUO, Barberry, & Honeysuckle Invasives Treatment	Summer CY2013
Combined Tract Timber Sale w/T12&18	FY2012-13
BMP Field Review	CY2014-2016
Postharvest Timber Area Improvement Project	CY2014-2018
Merging of Tracts 15 & 18 into new Tract 15	CY2018
Reinventory and Management Guide New Tract 15	CY2027

Attachments (Included in Tract File)

- Topo Map of Tract Features
- Tract Soils Map
- Aerial Photo of Tract
- INHD Review Map
- Stocking Guide Chart
- Printed TCruise Reports

Work Cited

European Buckthorn:

Resources, M. D. (2012). *Buckthorn - Invasive species*. Retrieved November 14, 2012, from Minnesota Department of Natural Resources: www.dnr.state.mn.us

Japanese Barberry:

Group, P. C. (2005, May 20). *Fact Sheet: Japanese Barberry*. Retrieved November 2012, from Weeds Gone Wild: Alien Plant Invaders of Natural Areas: www.nps.gov/plants/alien/

All Other Species:

Least Wanted: Alien Plant Invaders of Natural Areas. 19 April 2012. Plant Conservation Alliance's Alien Plant Working Group. 3 October 2012 <http://www.nps.gov/plants/alien/fact.htm>

Representative Sample Area (RSA) Assessments

Indiana Department of Natural Resources, D. o. (2012). *Establishment and Management of Representative Sample Areas on State Forests.*

To submit a comment on this document, click on the following link:
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You **must** indicate the State Forest Name, Compartment Number and Tract Number in the "Subject or file reference" line to ensure that your comment receives appropriate consideration. Comments received within 30 days of posting will be considered.