

Indiana Department of Natural Resources - Division of Forestry
DRAFT
RESOURCE MANAGEMENT GUIDE

State Forest: **Yellowwood**

Compartment: **3**

Tract: **19**

Forester: **K. DeCosta** (for Laurie Burgess)

Date: **12/8/2010**

Location

This tract is located in Sections 14 and 15 of Township 8N, Range 2E in Brown County. It is approximately 3.5 miles Southeast of Belmont and State Road 46.

General Description

This tract is 77 total acres in size and includes 1 noncommercial acre that accounts for a buffer zone around a sensitive area as well as an old haul road and log yard. The ridgetop area includes a unique tree composition including species such as Northern Hackberry, Black Walnut, Red and American Elm, Black Locust, White Ash, and Osage Orange. Invasives were also found throughout the ridgetop areas in this tract and include Black Locust, Multiflora Rose, Autumn Olive, Bush Honeysuckle, and Japanese Honeysuckle. The following species composition was found during the inventory according to their dominance:

Overstory	Understory	Regeneration
Chestnut Oak	Sugar Maple	American Beech
White Oak	American Beech	Sugar Maple
Black Oak	Yellow Poplar	Yellow Poplar
Northern Red Oak	Sassafras	Pawpaw
Scarlet Oak	Chestnut Oak	Red Maple
Yellow Poplar	Flowering Dogwood	Sassafras
Pignut Hickory	Pignut Hickory	Black Oak
Shagbark Hickory	Blackgum	Pignut Hickory
Bitternut Hickory	Osage Orange	American Elm
Sugar Maple	Black Locust	Red Elm
Sassafras		Black Cherry
Osage Orange		Ironwood
White Ash		
Large-toothed Aspen		
Northern Hackberry		
Black Walnut		
Black Cherry		
Red Elm		

History

This tract was granted to Yellowwood State Forest by the U.S. Government in 1956. Old aerial photographs show that the ridgetop area in this tract was opened up as agricultural land. This is also evidenced by the presence of Osage-orange trees. A timber sale occurred in 1988 of 130,398 BF in 553 trees and 172 culls. Autumn Olive and European Black Alder were planted around log yards in an effort to enhance wildlife habitat. A permit was issued in 1989 for the cutting of marked Osage-orange trees for fence posts. TSI and erosion control practices were conducted on the tract shortly after timber harvest completion as well as a stump jump that resulted in accounting for 92% of the marked trees that were sold. Also in 1989 this tract was opened up for commercial firewood cutting of standing trees and tops in the two harvested regeneration openings.

Landscape Context

The land surrounding this tract is forest. Managed State Forest borders the majority of the tract with a small portion bordering Brown County State Park.

Topography, Geology and Hydrology

This tract mainly covers the top and the northeast facing side of a ridge as well as a small portion of creek bottom. Topography ranges from flat on the ridgetop area and part of the creek bottom to 20% - 70% slopes throughout the rest of the tract. Northeast is the dominant aspect in this tract. Underlying soils range from 2 – 5.5 feet in depth to interbedded siltstone, sandstone, shale bedrock. One mapped intermittent stream serves as the tract boundary for a segment of the northeastern boundary. Several other unmapped ephemeral drainages occur through the tract. The water resource from this tract drains into Bales Hollow and from there into Little Blue Creek.

Soils

TIB (Tilsit silt loam, 2 – 6 % slopes) This soil is deep, moderately well drained, gently sloping. It comprises approximately 15% of tract on flat ridgetop area. Site index for Yellow Poplar is 90. Seedling mortality, windthrow hazard, equipment limitations, and erosion hazards are all slight for this soil type.

WaD (Wellston-Berks-Trevlac complex, 6 – 20% slopes) Moderately sloping to moderately steep. This soil type presents slight risks for erosion hazard and equipment limitation. Comprises approximately 10% of tract.

BgF (Berks-Trevlac-Wellston complex, 20 – 70% slopes) Moderately steep to very steep slopes and well drained soils. This tract is comprised of approximately 65% of this soil type and presents moderate - severe erosion hazards, severe equipment limitations, slight - moderate seedling mortality, and slight windthrow hazard. Management considerations should include building haul roads on a contour and constructing water bars to prevent erosion.

Be (Beanblossom) This soil type is deep and moderately well drained, gently sloping, or nearly level. It is subject to occasional flooding and so presents equipment limitations.

This soil type comprises approximately 10% of western boarder of tract at the bottom of the ridge.

Access

This tract is easily accessible from Salamander Ridge Road off of the main fire trail on Miller Ridge. Road improvements to this roadway were recently completed during timber harvests on other tracts in 2008 and 2009. An old haul road and log yards are present along the ridge in the tract but are in poor condition and would need to be cleared before reuse.

Boundary

This tract is mainly bordered by State Forest except a portion of the southeast corner that borders Brown County State Park. The boundary between this tract and Brown County State Park is marked with orange paint but is faded and should be repainted before the next harvest takes place.

Wildlife

Wildlife observed or heard in this tract included numerous bird and mammal species. Several rubs, scrapes, and trails suggested that parts of this tract are heavily utilized by white-tail deer. Two wildlife pond areas were also noted and mapped in this tract. An exotic goldfish population was observed in one of these ponds: an effort will be made to remove them as they depredate native pond-breeding amphibians and their larvae. Bird species encountered included White-breasted Nuthatch, Eastern Towhee, Carolina Chickadee, Tufted Titmouse, Carolina Wren, Blue Jay, Northern Cardinal, and American Crow. Woodpeckers encountered included Downy, Hairy, Northern Flicker, Pileated, and Red-Headed. This tract was inventoried in late fall so no spring or summer breeding birds were present, however, the dense shrub habitat surrounding the ridgetop area appears to provide excellent nesting habitat to shrub nesting bird species. A Natural Heritage Database review was conducted on the tract; no records were found inside the tract, however, nearby records included *Timber Rattlesnake*, *Hooded Warbler*, *Worm-eating Warbler*, *Black-throated Green Warbler*, and *Red-shouldered Hawk*. One Ruffed Grouse was flushed during the inventory. None of these species would be adversely affected by timber harvesting activities. Removing canopy trees or thinning encouraged a denser understory which is excellent habitat for these bird species. This tract also supported a large number of Red-headed woodpeckers – one of the less common woodpecker species. The only deficiencies found in the wildlife habitat feature summary were 20”+ Legacy Trees and 19”+ Snags in the available above optimal level as highlighted in red below.

	Maintenance Level	Optimal Level	Inventory	Available Above Maintenance	Available Above Optimal
Legacy Trees *					
<i>11"+ DBH</i>	693		1465	772	
<i>20"+ DBH</i>	231		228	-3	

Snags
(all species)

<i>5"+ DBH</i>	308	539	712	404	173
<i>9"+ DBH</i>	231	462	581	350	119
<i>19"+ DBH</i>	38.5	77	56	17	-21

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

Communities

A Natural Heritage Database review was conducted: no records of rare, threatened or endangered species were found within the tract. Nearby records include *Butternut* and *Yellowwood* trees. Both *Yellowwood* and *Butternut* trees benefit from regeneration openings as these areas tend to favor the regeneration of these species. Invasives were also found throughout the ridgetop areas in this tract and included Black Locust, Multiflora Rose, Autumn Olive, Bush Honeysuckle, and Japanese Honeysuckle. Pre harvest treatments are planned to prevent further spreading as well as a follow-up post harvest TSI treatment.

Recreation

This tract contains a seasonally open area for handicap hunters. There is also a nearby horse trail that follows the main fire trail on Salamander Ridge Road and Miller Ridge Road.

Cultural

Cultural resources may be present on the tract but their location is protected. Adverse impacts to significant cultural resources will be avoided during any management or construction projects.

Tract Subdivision Description and Silvicultural Prescription

Total Trees/Ac.= 531
Sawtimber & Quality Trees/Ac.= 47
BA/A= 111.3 sq.ft./Ac.
Present Volume/Ac.= 6,763 Bd.Ft./Ac.
Harvest Volume/Ac.= 2,670 Bd.Ft./Ac.
Residual Volume/Ac.= 4,093 Bd.Ft./Ac.
Overall % Stocking = 114% (Over-stocked)

This inventory was completed on November 5, 2010. 22 points were conducted over 77 acres (1 point for 3.5 acres). Inventory summaries are given above. In 1988-89 a timber harvest of 130,398 BF was completed within the tract. Two regeneration openings were made at that time of .5 acre and 2.3 acres during the harvest. Old haul road, log yards, and skid trails are still viable in the tract although would need clearing and improvement before being used again. The unique tree composition and thick understory of the flat

ridgetop area provides excellent wildlife habitat. Because of the unique wildlife habitat in this area, timber harvesting will be selective and may include TSI and single tree selection. The majority of this tract contains some mature yellow poplar sawtimber as well as oak-hickory, and other mixed hardwoods. I would recommend TSI in the old regeneration openings for vine control and selection of crop trees. Invasive species (Bush and Japanese Honeysuckle, Black Locust, Autumn Olive, and Multiflora Rose) were found around ridgetop areas and old log yards – most of these will be treated before any harvest activities occur. Black locust will be mostly treated through the harvest and postharvest TSI. The proposed harvest could be sold in conjunction with adjacent tract 22 because of shared access along the ridgetop haul road. Existing skid trails on this tract could also be used again. This tract is overstocked and would benefit from single tree selection to thin and release desirable crop trees. One area of oak mortality and another area on the southernmost part of the tract with modest windthrow damage could warrant regeneration. There is also an area with advanced oak regeneration along the central ridge that would benefit from some release. A modest sized, combined harvest is planned for 2011–2012 for this tract along with tract 22 following an inventory of tract 22.

Volume Estimates: Yellowwood SF Comp. 3 Tract 19

Species	Harvest	Growing Stock	Total Volume
Chestnut Oak	69870	62840	132710
Black Oak	35,180	44830	80010
Northern Red Oak	19300	54570	73870
White Oak	1260	69680	70940
Yellow Poplar	34460	11660	46120
Pignut Hickory	3570	31490	35060
Scarlet Oak	14170	10500	24670
Sugar Maple	3460	11610	15070
White Ash	10720	0	10720
Bitternut Hickory	0	5840	5840
Red Maple	5330	0	5330
Northern Hackberry	0	5240	5240
Shagbark Hickory	0	5060	5060
Basswood	2760	0	2760
Black Walnut	2760	0	2760
Largetooth Aspen	2750	0	2760
Sassafras	0	1870	1870
Totals	205,590	315,190	520,780

Volume Estimates: Per Acre

Species	Harvest	Growing Stock	Total Volume
Chestnut Oak	907	816	1724
Black Oak	457	582	1039
Northern Red Oak	251	709	959
White Oak	16	905	921
Yellow Poplar	448	151	599
Pignut Hickory	46	409	455
Scarlet Oak	184	136	320
Sugar Maple	45	151	196
White Ash	139	0	139
Bitternut Hickory	0	76	76
Red Maple	69	0	69
Northern Hackberry	0	68	68
Shagbark Hickory	0	66	66
Basswood	36	0	36
Black Walnut	36	0	36
Large-tooth Aspen	36	0	36
Sassafras	0	24	24
Totals	2,670	4,093	6,763

Proposed Activities Listing

<u>Proposed Management Activity</u>	<u>Proposed Date</u>
Invasives Treatment	2011-2012
Timber Marking	2011-2012
Timber Sale	2011-2012
Postharvest TSI and Invasives Treatment	2011-2013
ReInventory and Management Guide	2030

Attachments

Included in Tract File:

- Topo Map of Tract Features
- Tract Soils Map
- INHD Review Map
- Stocking Guide Chart
- Ecological Resource Review
- TCruise Reports

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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.