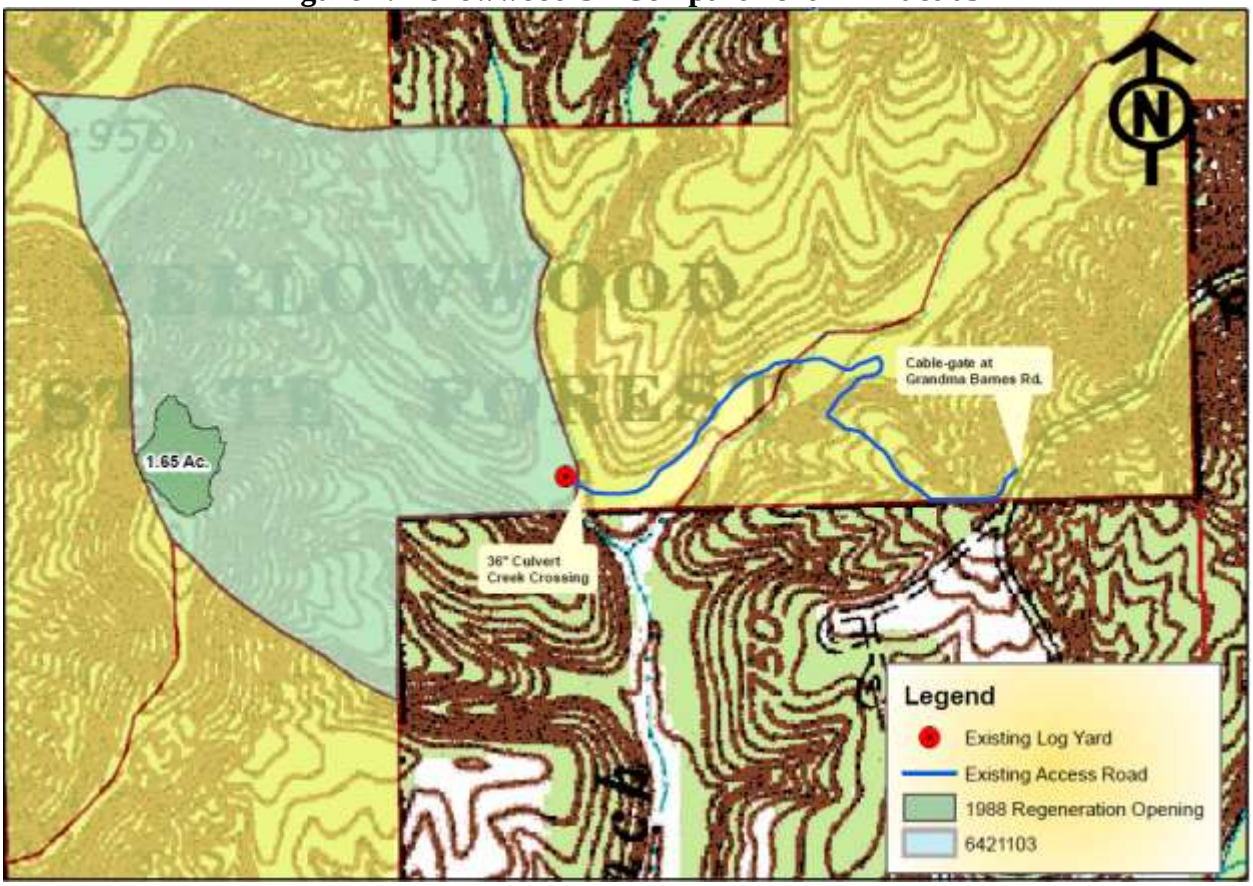
Indiana Department of Natural Resources – Division of Forestry
Draft
Resource Management Guide

State Forest: **Yellowwood** Compartment: **11** Tract: **03**
Tract Acreage: **52 acres** Commercial Forest Acreage: **52 acres**
Forester: **Kaylee DeCosta** (for Laurie Burgess) Date: **4/28/2011**

Location

This tract is located in Section 2 of Township 8N, Range 2E of Brown County. It is approximately 1 mile west of SR 135, 2 miles southeast of Helmsburg and 2 miles southwest of Beanblossom. Access is through a cable-gated haul road off of Grandma Barnes Road near SR 135.

Figure 1. Yellowwood SF Compartment 11 Tract 03



General Description

This tract is 52 total acres of closed canopy hardwood forest in Yellowwood State Forest, all of which constitute commercial forest acreage. The forest resource is predominantly medium to large sawtimber mixed hardwoods and mixed oak. The tract inventory species composition is listed below in Table 1 according to their dominance:

Table 1. Overview of Forest Resources

Sawtimber	Poletimber	Regeneration
White Oak	Sugar Maple	American Beech
Chestnut Oak	Yellow Poplar	Sugar Maple
Black Oak	White Oak	Ironwood
Yellow Poplar	Chestnut Oak	Yellow Poplar
Sugar Maple	American Beech	White Ash
Northern Red Oak	Red Maple	Flowering Dogwood
Pignut Hickory	Pignut Hickory	Red Maple
Shagbark Hickory	Sassafras	Downy Serviceberry
White Ash	Red Elm	Pignut Hickory
Red Maple	Northern Red Oak	Blackgum
American Beech	Blackgum	Sassafras
Sassafras		American Elm
Bitternut Hickory		Chestnut Oak
Black Cherry		Blue Beech
Blackgum		Red Bud
		Paw Paw
		Hackberry

History

The land on the northern part of this tract was granted to Yellowwood State Forest on 10/30/1956 by the U.S. Government. The land on the southern part of this tract was granted to Yellowwood State on 12/1/1952 by Millard and Dessie Joy for $1,080.00.

This tract has a history of timber management. Forester Eckart completed an inventory on 1/7/87 that resulted in 7,355 BF/ac present and an estimated 3,090 BF harvest at that time. In March 1987, a haul road into the tract was constructed from Grandma Barnes Road. Timber marking was completed in May 1988 by Forester Duncan. On 7/13/1988 a timber sale of 84,674BF was sold to Foley for $23,488. Logging was completed on 9/6/1988. Skids and hauls roads were barred and seeded in September-October of that year and reseeded again in May of 1989. Regeneration Opening had TSI completed on 12/1/1989 by Forester Eckart and crew. Boundaries were remarked in 2010 by Forester Spalding. Current inventory was completed by Forestry intermittent K. DeCosta.

Landscape Context

This tract is surrounded by other tracts of Yellowwood State Forest except in a small corner section in the southeast corner of the tract where it borders private forestland. Some ponds, grazing fields, and residential areas exist in the landscape vicinity.

Topography, Geology and Hydrology

This tract is composed mainly of one large east to southeast facing cove area with several narrow finger ridges interspersed throughout. Two small ridgetop areas exist along the western boundary

of the tract. Topography ranges from 6 to 70% slopes with East being the dominant aspect. The underlying soils range from 27 - 51 inches in depth to weathered siltstone interbedded w/sandstone and/or shale bedrock. One mapped intermittent creek serve as the tract's eastern boundary. Several other unmapped ephemeral drainages occur throughout the tract. Water resources from this tract drain into the East Branch of Owl Creek and from there into Salt creek which eventually drains into Lake Monroe.

Soils

BgF (Berks-Trevlac-Wellston complex, 20 – 70% slopes) Moderately steep to very steep slopes and well drained soils. This tract is comprised of approximately 90% of this soil type on sideslopes. Moderate to severe erosion hazards, severe equipment limitations, slight – moderate seedling mortality, and slight windthrow hazard exist in this soil type. Management considerations should include building haul roads on a contour and constructing water bars to prevent erosion.

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 along the two small ridgetop areas.

Access

Access into this tract originates off of Grandma Barnes via an old haul road that was utilized during a timber harvest in the tract in 1988. This access enters tract 05 where there is a small parking area at Grandma Barnes Road, crosses tract 04, and enters tract 03 along the creek bottom area. This haul road involves two mapped intermittent creek crossings. One on these crossings has an existing 36" culvert in fair condition. The other crossing would either involve the construction of another culvert, or a rip-rap crossing in order to facilitate vehicle access. This access should be limited to the drier periods of the year and so presents some challenges.

Boundary

This tract is surrounded by other tracts of Yellowwood State Forest except in a small corner section in the southeast corner of the tract where it borders private forestland. This small boundary is marked in orange paint on trees and is up to date.

Wildlife

A Natural Heritage Database Review was completed. If Rare, Threatened or Endangered species (RTE's) 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.

A timber harvest would encourage the growth of a denser understory and shrub layer component in this tract. This habitat type provides cover and nesting habitat for Worm-eating, Hooded, and Black-and-White Warblers. None of the management recommendations for this tract will be detrimental to the current habitat type that is provided in this tract and preferred by these three warbler species. Cerulean Warblers typically inhabit large tracts of mature deciduous broadleaf hardwood forest. Such habitat is provided in this tract. According to the Indiana State Forest Environmental Assessment handbook, research in Indiana has shown that Cerulean Warblers do not show avoidance for harvested areas and also that canopy gaps may be an important

component of Cerulean habitat. Red-shouldered Hawks typically inhabit areas of mature deciduous bottomland forest such as is provided in the vicinity of this tract.
Other species most likely utilizing this tract include white-tailed deer, gray and fox squirrels, eastern chipmunk, raccoon, opossum, coyote and other small mammals.

Communities
Maple-leaved viburnum, greenbrier, and spicebush were commonly observed throughout the tract.
Multiflora Rose was noted in a few areas and especially thick in the creek bottom area. Other invasives occurring in the creek bottom area in this and in neighboring tracts included Japanese Barberry and Autumn Olive which was especially thick and should be treated.

Recreation
This tract is easily accessible to the public from the small parking areas at Grandma Barnes Road. Recreational opportunities include hiking, hunting, mushrooming, and wildlife/nature viewing.

Cultural
Cultural resources may be present on this tract but their location(s) are protected. Adverse impacts to significant cultural resources will be avoided during any management or construction activities.

Tract Subdivision Description and Silvicultural Prescription

Tract Summary Data

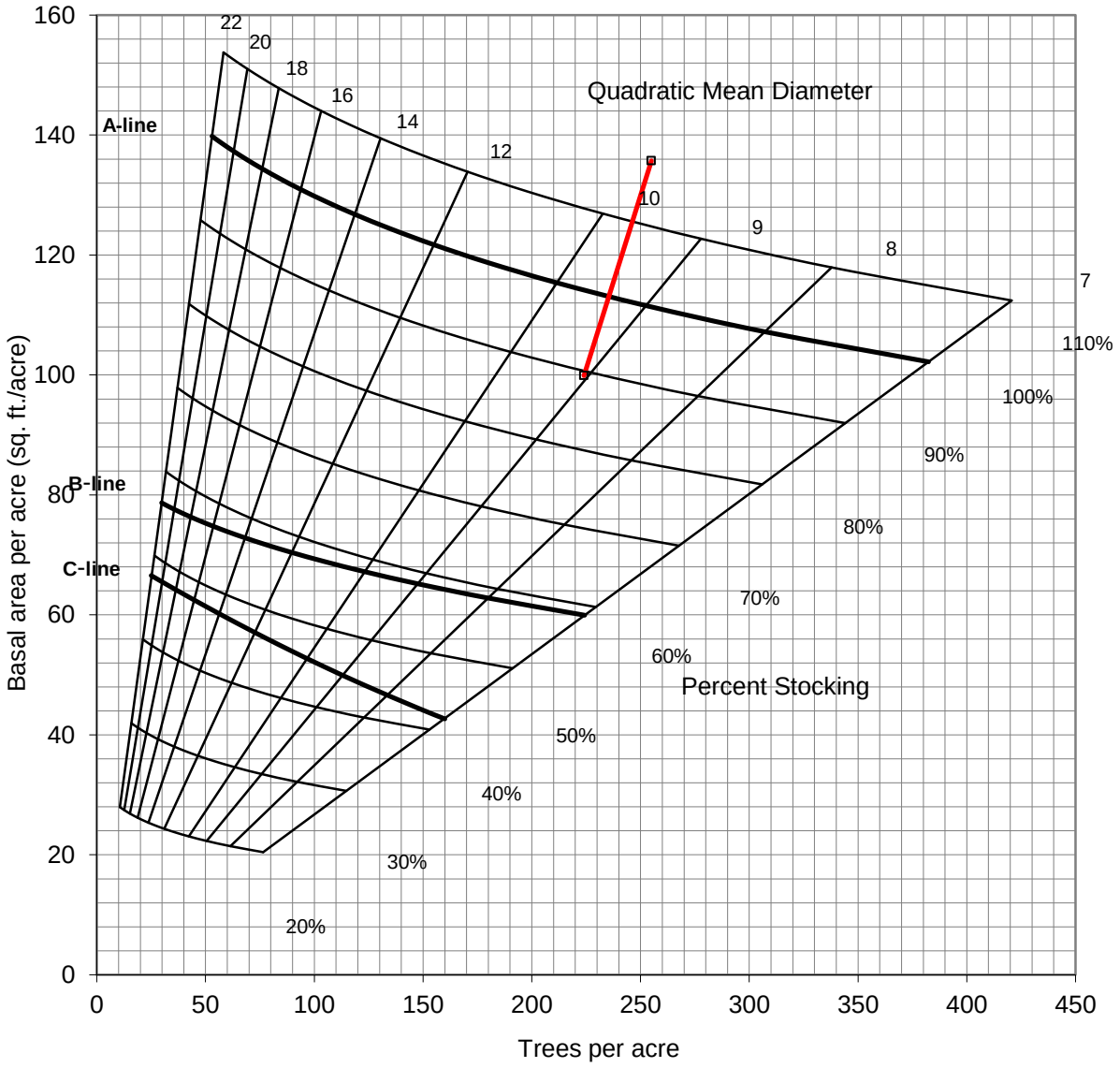
Total Trees/Ac.= **255** Overall % Stocking = **120% (Over-stocked)**

Sawtimber & Quality Trees/Ac.= **49** BA/A= **135.7 sq.ft./Ac.**

Present Volume = **10,504 Bd. Ft./Ac.**

Harvest Volume = **2,782 Bd. Ft./Ac.**

Growing Stock Volume = **7,721 Bd. Ft./Ac.**



The inventory of this tract was completed on April 28, 2011 by Forestry Intermittent K. DeCosta. 24 prism points were completed over 52 acres (1 point for every 2.17 acres). Inventory summary results are presented above. This tract is overstocked, and a managed timber harvest is recommended at this time.

Tract Description and Prescription
This tract is dominated mainly by mixed oak and mixed hardwood species. Chestnut oak dominates the upper ridgetop areas with white oak and black oak in co-dominant positions. Mature yellow-poplar and black oak were common throughout the tract. Other mixed and cove hardwoods are present along the steep east facing slopes. Mature American beech trees were common and were mostly cull trees. Timber quality varies by site and aspect throughout the tract. Some high quality white oak trees were noted on the some of the more gently sloping areas.

It is recommended that logging be performed during dry periods to reduce erosion and rutting of the access road in the creek bottom area which is subject to some seasonal inundations. A potential or future timber harvest in this tract would mainly utilize single tree selection to remove mature, suppressed, or deformed trees. The most common tree deformities encountered in this tract were low-forking stems, epicormic sprouting, and sweeps in the stems. Some regeneration in group selection cuts is also recommended. These areas are mostly small in size and are characterized by windthrow damage and overall poor quality and species composition. This tract also contained a decent amount of white ash, which should be removed through salvage harvesting. Mixed native hardwood regeneration is expected- including ash to capture this seed opportunity prior to EAB induced tree mortality. This harvest would remove approximately 100 to 150 MBF.

A timber stand improvement plan is recommended for this tract during this management cycle to treat invasives and grapevines. The 1 ½ acre regeneration opening from 1988 has grapevines which are slowing the growth of and causing severe deformities on the regenerating yellow-poplar. Vine TSI is strongly recommended for that area. Grapevines were noted throughout this tract and should be treated in any areas where they are growing on residual trees. TSI could also treat invasives which are especially thick along the creek bottom area in this and in neighboring tracts.

This tract should be inventoried again 15 years following the proposed timber harvest.

Volume Estimates: Yellowwood SF Comp. 11 Tract 03

(April 2011 Inventory Data)

Species	Total
Black Oak	64,380
Yellow Poplar	80,560
White Oak	161,170
Chestnut Oak	108,500
White Ash	14,080
Northern Red Oak	54,880
Sugar Maple	18,790
Shagbark Hickory	10,890
Sassafras	1,790
Pignut Hickory	25,810

Bitternut Hickory	1,840
Red Maple	3,500
Tract Totals (Bd. Ft.)	**546,190**
Per Acre Totals (Bd. Ft./Ac.)	**10,504**

Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Mark Timber Harvest	CY2016
Sell Timber Sale	FY 2016
TSI and Invasives Treatment	CY 2016-2020
ReInventory and Management Guide	CY 2021-2023

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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. Note: Some graphics may distort due to compression.