RESOURCE MANAGEMENT GUIDE

DRAFT

State Forest: Morgan-Monroe **Compartment :** 16 **Tract:** 7
Forester Amy Zillmer **Date** June 30, 2009
Management Cycle End Year: 2019 **Management Cycle Length:** 10 years

Location

Tract 7 is located in the Benton Township in section 21, T9N, R1E, Monroe County. It is about 7 miles northeast of the city of Bloomington and 2 miles south of Unionville.

General Description

This tract covers approximately 41 acres of which all are considered to be commercial. The tract is relatively homogenous with south slopes consisting of xeric oak-hickory and bottomlands and north facing slopes comprised of mixed hardwoods.

History

This portion of land was granted to the Morgan-Monroe State Forest in July of 1954 by Marshall and Grace Bruns. Management under state ownership has been limited due to inadequate access. In 1986 a survey request was submitted over a line dispute with adjacent private property owner. Area was considered for past management in the late eighties due to poor timber quality (i.e. excessive fire damage). Management has not been conducted on tract due to access and unsuccessful attempts at gaining the best access across private property.

Landscape Context

As with most areas in the Brown county hills, closed canopy forest is the most dominant land use surrounding tract. Agriculture is also common in the more level valleys. Urban development is increasing around the city of Bloomington.

Topography, Geology and Hydrology

This tract consists of one main ridge that grades down into the southeast. There are about 8 acres of ridgetops, 21 acres of southern slopes, 7 acres of northern slopes, and 5 acres of bottomlands. The tract's underlying geology is a combination of shale and sandstone. Two mapped drainages run along the north and south sides of main ridge into Brummett's Creek. This creek flows south into Lake Monroe.

Soils

<u>BkF-Berks-Weikert complex, 25 to 75% slopes</u>

This complex makes up the majority of tract's soil. It is formed from loamy-skeletal residuum over shale and sandstone. It generally forms on back or side

slopes. This complex is commonly cleared and used for agriculture. It is well drained with a low to very low available water capacity (1.7 to 3.9 inches). This soil has severe limitations for mechanical harvesting due to slope, low strength, and landslides. It holds a site index of 70.

Bu- Burnside silt loam, nearly level
Burnsides are generally found on narrow floodplains and alluvial fans in valleys of sandstone hills. It forms from silt and loamy alluvium over loamy fragmental sediments. Due to flooding frequency it is unsuitable for buildings. Slight limitations exist for forest management. It holds a site index of 95.

Access
As described earlier, access is a problem with this tract. The best access would be across private property. Alternative access could be created from a southern tract of state forest. Due to the topography access would most likely be limited to skidders only with yarding locations to the south.

Boundary
The west, north, and east boundary line of tract also serve as property lines. These lines are up to date and were repainted in the 07/08 fiscal year. The southern boundary is made up by a prominent drainage.

Wildlife
An official Natural Heritage Database Review was done for this tract. Although no rare, threatened, or endangered plant or animals were sighted, this area does provide a rich habitat. This tract supports many woodland species including but not limited to white-tailed deer, wild turkey, eastern gray squirrel, fox squirrel, chipmunks and various songbirds.

Wildlife Habitat Features
The Indiana Division of Forestry recognizes the potential to enhance wildlife habitat, including that of the Indiana Bat, on its lands by implementing comprehensive management principles. These management principles include obtaining data on size, species, and numbers of live legacy trees, snags, and cavity trees. Snag trees and some specific species are an integral part of the Indiana bat policy as they are prime roosting sites for maternal colonies.

Table 1. Legacy Trees inventoried 2008 6371607.

Size Classes	Maintenance Level	Inventory	Available For Removal
11"+ DBH	360	849	489
20"+ DBH	120	177	57

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

Table 2. Snag Trees inventoried 2008 on 6371607

Size Classes	Maintenance Level	Optimal Level	Inventory	Available above Maintenance	Available above Optimal
5"+ DBH	160	280	689	529	409
9"+ DBH	120	240	212	92	-28
19"+ DBH	20	40	42	22	2

Table 3. Cavity Trees inventoried 2008 on 6371607.

Size Classes	Maintenance Level	Optimal Level	Inventory	Available above Maintenance	Available above Optimal
7"+ DBH	160	240	327	167	87
11"+ DBH	120	160	327	207	167
19"+ DBH	20	40	150	130	110

Currently this tract is exceeding all habitat guidelines for legacy trees, snags, and cavity trees in all size classes.

Recreation
This tract does not contain any developed recreational features. It is most likely used for hiking, hunting, and wildlife viewing.

Cultural
This tract did not contain any cultural features.

Tract Subdivision Description and Silvicultural Prescription

Species	Harvestable	Growing Stock	Total
American Beech	4,420	5,540	9,960
Black Oak	14,330	2,880	17,210
Largetooth Aspen	4,130	0	4,130
Northern Red Oak	0	7,920	7,920
Pignut Hickory	1,360	0	1,360
Red Elm	870	0	870
Red Maple	1,230	3,820	5,050
Scarlet oak	37,250	31,180	68,430
Sugar Maple	2,610	4,920	7,530
White Oak	18,570	76,640	95,210
Yellow Poplar	14,780	18,570	33,350
Total	**99,550**	**151,470**	**251,020**

Currently this tract is fully stocked (91%) with an average of 101 square feet of basal area per acre. The inventory estimated a total of 6,276 BF/acres with 2,489 BF of which is harvestable and 3,787 BF reserved as growing stock.

The south facing slopes overstories are dominated by scarlet and white oak. Much of the scarlet and black oak is in decline and show signs of excessive damage due to history of past fire and insects. The white oak, although of moderate quality, would be one to favor on this sight for future growth. These sights would be greatly aided by both single tree and group selection to improve the overall quality of the stand

Due to heavy shading, there is a significant amount of beech/maple in the understory. Due to the xeric nature of this area, there is also a notable component of oak and hickory. Pre- harvest work, such as midstory release, would be beneficial to increase the competiveness of these stem. Marking objectives for this stand should be aimed at releasing more vigorous mast producing understory species when possible.

The northern facing slopes are made up of a mixed hardwood composition. Mainly yellow polar, red and sugar maple, and mixed oak species. Both single tree and group selection for stand improvement are recommended to improve overall stand quality.

Summary Tract Silvicultural Prescription and Proposed Activities
Although this stand could greatly benefit from management, there is no current access at this time. More investigation should be done to determine if a route from the south can be established. If route can be established, a timber harvest is recommended in the next 5 years. If no route can be established, it is recommended that this area receive be reevaluated in 10 years.

Proposed Management Activity	*Proposed Date*
Determine Access	2009
Access gained	
Timber Harvest	2010/2015
Access not gained	
Timber Stand Improvement	2010
New Management Guide	2019

Attachments kept in Tract File
Ecological Resource Review
Topographic map with tract subdivisions
Aerial photo with tract subdivisions
Soil type map of area
TCruise reports

To submit a comment on this document, click on the following link:
http://www.in.gov/surveytool/public/survey.php?name=dnr_forestry

You **must** indicate “Morgan-Monroe C16 T7” 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.