

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

**Morgan-Monroe State Forest**    Compartment **05**                      Tract **16**  
 Total Tract acreage: **28 acres**      Commercial Acres: **22 acres**      Date: **1/06/11**  
 Forester: **T. Tompkins**

**Location**

Tract 16 is located in Monroe County, Section 4, T10N, R1E. This tract includes the Assistant Property Manager’s residence at the end of main Forest Road.

**General Description**

The cover type within this tract is primarily mixed hardwood with a large mixed oak component in the harvestable acreage. The southern half of the tract consists of an early successional regeneration opening of about 13 acres created following a major windstorm in 1990. There is also a mixed pine stand located on the edge of the tract along the Assistant Property Manager’s driveway and the main Forest Road. Five acres of this tract are occupied by the house and yard of the Assistant Property Manager. There is also a power line right of way near the main road. The 2010 inventory data noted the frequency of tree species within each size category (listed in descending order of occurrence):

<b>Sawtimber</b>	<b>Poletimber</b>	<b>Regeneration</b>
Yellow poplar	Yellow poplar	Yellow poplar
Red maple	Sassafras	Red maple
Black oak	Mixed pine	Sugar maple
White oak	Black oak	American elm
American beech	Black cherry	American beech
Red oak	Red maple	Sassafras
Black cherry	Sugar maple	Black cherry
Black walnut	American beech	Pignut hickory
Sassafras	White oak	Red oak
White ash	Pignut hickory	Mixed pine
Chinkapin oak	American elm	American sycamore
Pignut hickory	American sycamore	White spruce
Chestnut oak		
American sycamore		

**History**

**Resource management history for tract 16:**

- 04/18/1930                      Eight acres in southeast portion of tract planted with 6,000 Corsican Pine and 4,800 Scotch Pine by R. Hacker and J.S. Deam
- 04/06/1931                      Southeast edge of tract planted with 1,000 Norway Spruce by R. Hacker.
- 06/15/1990                      Salvage Sale – 13 acres. Sold by Forester D. Vadas to Hawkins Logging DBA; Sale was part of a multitract salvage harvest in MC5.
- 03/01/2010                      Inventory Completed by intermittent forester Wallis.

**Landscape Context**

This tract is surrounded by managed State Forest on all sides; part of the east boundary is bordered by the residence of the Assistant Property Manager. A 13 acre portion of the tract is in a late stage of early succession mixed hardwoods due to a major windstorm that occurred in 1990. A large portion of the adjacent tract to the west (M0515) was also

devastated by this same storm creating additional early successional habitat. Modest areas of forest recreational facilities are nearby which include the 3 Morgan-Monroe campgrounds, the Forest Headquarter complex & residences and the Scout Ridge Nature preserve and hiking trail. Within the tract there are remnants of the pine & spruce plantings in the 1930's that still provide some additional diversified habitat for forest wildlife and songbirds.

### Topography, Geology and Hydrology

The tract is comprised of about 46% ridgetop and the remaining acreage covers sideslopes with all aspects of slopes ranging from 5-65%. The soil types noted in the next section are unglaciated soils and have formed from the bedrock material of sandstone, shale and siltstone. The tract has one unmapped stream that makes up its western border. Water flow from this stream heads into Gose Creek which in turn drains into Little Indian Creek.



### Soils

<b>BkF</b>	Berks-Weikert Complex.	25 – 75% slope	Sandstone-Bedrock – 38”
SI – 70	Well drained. Most areas woodland. Soil suited to trees.		
15.5 Acres	Severely limited to dwellings with basements due to slope and bedrock.		
<b>BdB</b>	Bedford silt loam.	2 – 6% slope	Fragipan at depth of 20-30”
SI – 75	Moderately well drained. A few areas in woodland. Soil suited to trees.		
12.5 Acres	Moderately limited to buildings because of wetness, shrinking and swelling.		

(Building skid trails on the contour and constructing waterbars are measures taken to reduce erosion potential. SI = Site Index.)

### Access

There is good access to all parts of this tract. The previous salvage harvest accessed the tract from off McGose Firetrail. The harvestable portion of this tract north of the Assistant Property Manager's house can be accessed through this driveway. Portions of the firetrail behind the Assistant Property Managers house will need modest erosion control rehabilitation.

## Boundary

This tract is surrounded by State Forest all sides and includes the residence of the Assistant Property Manager.

## Wildlife

Wildlife resources in this tract are abundant. Common species which are present include: squirrels, white-tailed deer, turkey, coyote, various small furbearing animals, and a variety of songbirds. The inventory for this tract included recording structural habitat features at each data point; these records include snag (dead, standing tree) counts. The results of these collected data for snag counts are included on the bat guidelines form for this tract.

Legacy trees*	Maintenance level	Inventory	Available above Maintenance
11" + DBH	252	177	-75
20" + DBH	84	63	-21

\*Species include American elm, Bitternut hickory, Cottonwood, Green ash, Red oak, Post oak, Red elm, Shagbark hickory, Shellbark hickory, Silver maple, Sugar maple, White ash and White oak

Snags (all species)	Maintenance level	Optimal level	Inventory	Available above Maintenance	Available above Optimal
5" + DBH	112	196	696	584	500
9" + DBH	84	168	54	-30	-114
19" + DBH	14	28	10	-4	-18

Cavity trees (all species)	Maintenance level	Optimal level	Inventory	Available above Maintenance	Available above Optimal
7" + DBH	112	168	37	-75	-131
11" + DBH	84	112	37	-47	-75
19" + DBH	14	28	13	-1	-15

## Communities

A Heritage Database Review was completed on this tract. Timber Rattlesnake and Indiana Bat were found in this tract. Many other species were noted on nearby acreage including: Bobcat, Cerulean, Worm Eating and Hooded Warblers, and Trailing Arbutus, (a rare plant) as well as Butternut which is a state threatened tree. There are also two rare forest types nearby: dry mesic upland forest and mesic upland forest. All of the animal species located in or around this tract are compatible with single tree selection and small to medium sized opening harvests. Because of their adaptations to forest management no special management guidelines will occur in this area. Post harvest TSI in this tract will be completed and will increase the number of snags creating additional habitat for the Indiana Bat. If either plant species are discovered during pre-harvest, harvest and TSI operations they will be documented, buffered from management and protected.

## Invasives/Exotics

Multiflora Rose was noted in the inventory and will be treated using foliar applied herbicide during the post harvest TSI.

**Recreation**

This tract has a recreational roadside pulloff adjacent to Main Forest Road. Historically this area with its Norway Spruce overstory has been a popular picnicking and recreational way stop. Hunting does not occur on this tract because of its location inside the safety zone however the parking area provided does allow some hunters and other recreational visitors to park there and hike along & through McGose firetrail.

**Cultural Resources**

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.

**Inventory Results from March 2010**

<b><u>Present tract volume estimates:</u></b>	<b><u>Basal Area (includes sub-merch. stems)</u></b>
<b>Harvest volume 1,764 Bd. Ft./acre</b>	<b>22.5</b>
<b>Leave volume 2,610 Bd. Ft./acre</b>	<b>64.8</b>
<b>Total tract 4,374 Bd. Ft./acre</b>	<b>87.3</b>

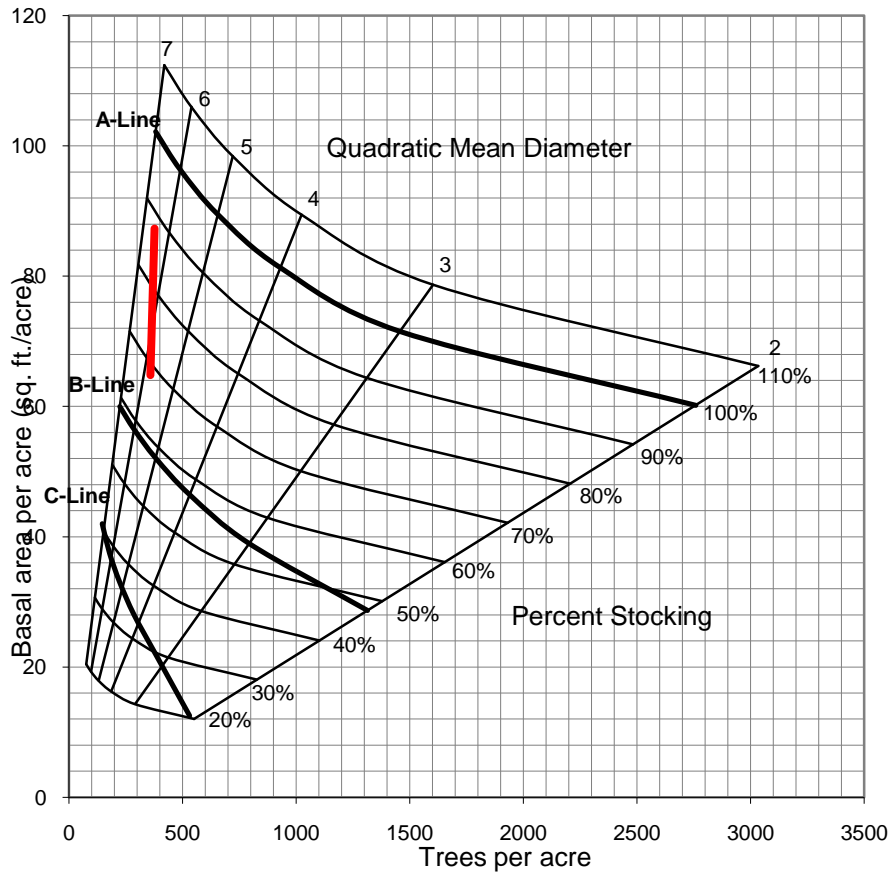
Harvest/Leave Report Summary

MBF=1000 board feet

SPECIES	HARVEST MBF	LEAVE MBF	TOTAL MBF
Yellow Poplar	16.55	17.64	34.19
White Oak	3.71	15.33	19.04
Black Oak	7.93	8.72	16.65
Northern Red Oak	0.49	13.66	14.15
Red Maple	9.27	0.0	9.27
American Beech	5.51	3.44	8.95
Black Cherry	1.1	3.75	4.85
White Ash	3.17	0.0	3.17
Black Walnut	0.0	3.17	3.17
Sassafras	0.52	1.11	1.63
Pignut Hickory	0.0	1.46	1.46
American Sycamore	0.0	1.35	1.35
Chestnut Oak	1.15	0.0	1.15
Chinkapin Oak	0.0	0.58	0.58
<b>TOTALS</b>			
TRACT TOTAL (MBF)	49.4	73.08	122.48
PER ACRE (MBF)	1.76	2.61	4.37

Discrepancies due to rounding.

Hardwood stand Acreage	28acres	Present Volume per Acre	4,374 bd. ft.
Basal Area per Acre	87.3 sq. ft.	Harvest Volume per Acre	1,764 bd. ft.
Number Trees per Acre	377	Residual Volume per Acre	2,610 bd. ft.
Stocking Percentage	89%	Average Tree Size	5.0" dbh.



### Tract Prescription and Proposed Activities

This tract is comprised primarily of mixed oak/hickory in the harvestable area, mixed hardwood poles in the old opening area and one Mixed pine stand on the southeast corner. The inventory results indicate the northern portion of this tract would sustain and benefit from a harvest this cutting cycle. This harvest will be combined with the harvest in Compartment 03 Tract 10. The prescription is for an intermediate, improvement cutting utilizing single-tree selection. The 13 acre opening created in the 1991 salvage sale will be included in post-harvest TSI. A croptree release treatment with emphasis on reducing grapevine competition will be prescribed.



The marking objective will be the removal of mature & over-mature stems, as well as those individuals of low quality in an effort to improve the overall health, vigor and composition of the stand. The reduction of stocking should provide space for pre-selected croptrees to move forward into the next cutting cycle. The resulting species composition will likely become more diverse and less susceptible to insect and disease infestation which is a common problem with homogeneous stands. These management techniques will improve the forest's health while utilizing a resource that is declining due to natural mortality, overstocking or maturity. Post harvest TSI is planned to reduce the stocking in some areas of high basal area with pole-sized stems and release croptrees not successfully released during the harvest. From this inventory an estimated 40,000 Bd. Ft of timber is available for a harvest. The cutting cycle for this tract is estimated to be 20 years. A combined tract harvest with M0310 is planned for spring of 2011.

Wildlife will benefit from this harvest as well. Additional sunlight penetrating the forest floor will simulate the development of new ground flora, subsequently increasing nesting and foraging habitat. This is essential for game and non-game species as well as continued forest development. Post-harvest TSI will increase snags per acre while diversifying diameter distributions of both snags and growing stock trees.

Habitat & cover types currently present within the tract will remain throughout the majority of the tract after the proposed management activities are completed.

**Proposed Activities Listing**

**Date Planned**

Archaeological Site review	Early 2011
Timber marking	Spring 2011
Timber Sale	Late Spring 2011
Timber Harvest & Post Harvest TSI	2011-2014
Stand Re-inventory work	2030

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