RESOURCE MANAGEMENT GUIDE

Morgan Monroe State Forest **Compartment 10 Tract 09**
Forester: Sean A Sheldon **Date**: 2/13/08 **Updated:** 9/30/09
Management Cycle End Year: 2028 **Management Cycle Length:** 20 years

Location

Compartment 10, Tract 09 is located in Sections 5, Township 10N, and Range 1W. This tract lies in the western half of Morgan Monroe State Forest near the intersection of Buskirk and Burma Roads.

General Description

Compartment 10 Tract 09 is 51 acres of closed-canopy mixed hardwood forest and approximately 6 acres of Red pine planted over 50 years ago. 45 acres of the total 51 are considered commercial due to steepness and poor to no access. The topography ranges from steep drainages to flat ridge. Average gradient is 45-65%.

History

The current tract acreage was acquired from Mr. Leavitt in a 50 acre acquisition in May of 1950. No timber management in the form of harvests or TSI has been implemented since State Acquisition. Prior to 1989 the current tract form & acreage were included within a larger tract (4) of 219 acres. A FDPS inventory of these 219 acres was completed on 4/5/84 by Foresters Breedlove & Vadas. The inventory showed 2,507 BF/A of harvestable volume. In January of 1986, Forester Vadas reported a cattle fence encroachment on the tract's N line during the first boundary marking of the tract. Timber marking was completed by Vadas in the large tract 4 in 1985 & 1986. 3 attempts at selling the marked timber were unsuccessful in 1986 & 1987 due to low bids and poor access. An inventory was completed by Forester Sheldon of the current tract on 5-31-07 which indicated a potential harvest of 3,936 BF/A. The north line was resurveyed due to an adjacent private land boundary dispute at the NW property corner in 2009.

Landscape Context

This tract lies in a largely residential/farming community of Monroe County. Houses and primary roads are less than 1/10 of a mile. Land surrounding the tract to the south is privately owned, forest land. The land to the west of the tract is developed private land with a house, horse barn and corrals. Land to the north is privately owned agricultural land with a house less than a ¼ mile from boundary. To the east of the tract is State Forest land. There is a possibility of further development to the West and North of tract.

Topography, Geology and Hydrology

The topography ranges from flat ridge tops to steep and moderately steep slopes at drainages. Average gradient is 45-65%. The primary drainage in this tract is the Indian Creek drainage. This tract is divided in the western portion by an intermittent stream that flows into Indian Creek. The eastern boundary is a large intermittent stream that flows into Indian Creek.

Soils
This tract is primarily Berks-Weikert complex (BkF) in 25-75% slopes. Ridgetops are generally Bedford silt loams (BdB) in 2-6% slopes. Hillsides are composed of Crider silt loam (CrC) in 6-12% slopes. More detailed information can be found in soil survey of Morgan County of Indiana.

Access
Access to the tract is from northwest, across private land for approximately 1/8 mile. Access across private land will require road work including the establishment of a skid trail system into the tract from the west private property owner along with some stoning.

Boundary
Tract is bounded on the North, West and South by private land. The East boundary is a large intermittent stream that flows into Indian Creek drainage. All of the tract's private line boundaries were surveyed in July 1987 by Robert Vollmer and concrete/brass monuments were placed at the tract's NW & SW property corners. Established lines have been repainted and reposted following the survey every 5-6 years. The north boundary line surveyed in July 1987 had a pasture/cattle fence (Grieco property) encroachment that had an erratic fence that crisscrossed state property. The N line of the tract was resurveyed in 2009 by Vollmer & Ballintyn due to an errant W1/4 Section 5 stone. Additional boundary marking is not required at this time.

Wildlife
Wildlife resources in this tract are abundant. Common species present include Pileated woodpecker, white-tailed deer, various small, furbearing animals and a variety of songbirds. Tree species composition in this tract is diverse ranging from disturbed site species such as sassafras and black walnut on ridgetops to bottomland hardwoods near streams, as well as pine. This diversity lends itself to diverse wildlife habitat. Shagbark hickory and American elm on site provide potential bat habitat. Oak-Hickory component is abundant across tract and provides availability of fruits.
An official wildlife review has been completed for this tract. This review focuses on wildlife habitat, looking at what is present in the tract and what can be created through management activities. Snags, commonly known as dead, standing trees, were inventoried as well. This snag information was used to complete a bat management guideline form. The snag information from the current inventory is attached below (Table 2).

In order to provide some specialized habitat, we have decided to do a number of the following management activities.

1. Leave as many snags as possible.
2. Leave as many Shagbark and Shellbark hickories as possible. These hickories provide mast and valuable habitat for several species.
3. Any log landing will be seeded in. This will provide some variety in habitat type for wildlife.

Indiana Bat Habitat Guidelines

The Indiana Division of Forestry recognizes the potential to enhance the Indiana bat habitat on its lands by implementing comprehensive management principles. These management principles include obtaining data on size, species, and numbers of snags 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.

In accordance with Indiana Bat Guidelines, this tract meets residual stand requirements regarding roost and nesting trees. Indiana Bat Guidelines calls for at least 3 trees/Acre 20+ inches in diameter and 6 trees/Acre11"+ in diameter be left on site after harvest. This tract will retain 5.3 trees/Acre 20"+ in diameter and 19.8 trees/Acre 11+ inches in diameter.

Table 1. Legacy Trees inventoried June 12, 2007 on 6371009 (over 51 Acres)

Size Classes	Maintenance Level	Inventory	Available For Removal
11"+ DBH	459	991	532
20"+ DBH	153	269	116

**** Species Include:*** *American Elm, Bitternut Hickory, Black Locust, Cottonwood,, Green Ash, Northern Red Oak, Post Oak, Red Elm, Shagbark Hickory, Shellbark Hickory, Silver Maple, Sugar Maple, White Ash, White Oak*

These species of trees, whether dead, dying, or alive have a relative high value as potential Indiana Bat roost trees and are encouraged for conservation.

Table 2. Snag Trees inventoried June 12, 2007 on 6371009 (Over 51 Acres)

Size Classes	Maintenance Level	Inventory	Available for Removal
9"+ DBH	306	269	-37
19"+ DBH	51	85	34

Communities

The Heritage Database Review for this tract has reported no unusual plant communities on tract. Japanese honeysuckle has been spotted on tract as well as black locust trees. Pesticide spraying, girdling and spot removal is planned prior to harvest.

Recreation

This tract is isolated from public access on three sides thus general public use is restricted. Local use opportunities exist for adjacent private landowners for wildlife viewing, mushroom hunting, hunting and hiking.

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

The current tract inventory was completed by Sheldon on 5-31-07. Overall, the present volume of this tract contains 7,474 BF/A with an estimated harvest of 3,940 BF/A. A summary of the current inventory's species and volumes is in the table below.

Table 4. Harvest/Leave Volume Estimate (BF-Doyle) from **June 12, 2007** Inventory

Species	Harvest Stock	Growing Stock	Total Volume
American Beech	6,080	0	6,080
Bitternut Hickory	3,960	2,270	6,230
Black Oak	80,390	44,280	124,670
Largetooth Aspen	17,320	0	17,320
Northern Red Oak	15,240	15,250	30,490
Pignut Hickory	3,820	12,510	16,330
Red Maple	2,130	5,150	7,280
Red Pine	5,350	0	5,350
Sassafras	3,360	0	3,360
Shagbark Hickory	840	11,610	12,450
Sugar Maple	0	3,540	3,540
White Ash	3,920	0	3,920
White Oak	23,220	51,930	75,150
Yellow Poplar	35,290	33,690	68,980
Totals	**102,120**	**173,960**	**276,080**
Average per Acre	**3,940**	**3,534**	**7,474**

This tract is composed of two timber types. There is a six-acre stand of Red Pine that was planted over 50 years ago. These pine are in the 14-18" diameter range and relatively healthy. Early successional hardwoods have begun encroaching on this stand. Within the pine stand, there are old erosion cuts from the adjacent farm land. These pines are stabilizing the soil in the area. These pines will be removed where they are hindering growth of desirable oak and hickory species and will be retained where they are contributing to soil stabilization.

The majority of this tract falls within the second timber type which is the Mixed Oak-Hickory grouping. BLO, WHO, and YEP are the primary volume contributors.

Black oaks in this stand are generally mature to over-mature. Removal of the mature to over-mature Black oaks will lead to pole size trees moving from intermediate size class to co-dominant status. There are 1,576 Bd. Ft / Ac. of Black oak in this tract.

There are 1,480 Bd. Ft / Ac of White oak in this stand with a good portion of these trees of high quality. Removal of the large, poorly formed White oak in this stand will support younger trees growing to co-dominant size class.

There are 1,350 Bd. Ft. / Ac. of Yellow poplar in this tract. Mature to over-mature trees will be removed allowing for pole size trees to reach co-dominant placement in canopy.

There are small areas within this tract where disturbed site species (SAS and BLL) compose the timber type. As BLL is an invasive nonnative hardwood species our management will be to remove this species when encountered either through timber marking or TSI. Poor formed or suppressed SAS trees will be removed when possible to allow for other more desirable species groups in poletimber or advance regeneration to move into the canopy.

Proposed Activities Listing

Timber Sale planned in 2009/2010 fiscal year.
TSI work during 2010/11 fiscal year.
Stand Re-inventory work 2028.

Attachments (on file in Property office)

- A topographical map of the tract.
- A map showing the soil types in the tract.
- A stocking guide chart.
- HDR map
- Timber Type Map

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