Indiana Department of Natural Resources
Division of Forestry

DRAFT

RESOURCE MANAGEMENT GUIDE

State Forest: Morgan-Monroe **Compartment**: 14 **Tract**: 09
Tract Acreage: 84 acres **Commercial Forest Acreage**: 84 acres
Foresters: Joshua Kush & Sean Sheldon **Date**: 4/21/2008 **Revised**: 1/19/2012

Location

Compartment 14 Tract 09 is located in Sections 16 & 21, Township 10N, and Range 1E in Monroe County. This tract lies on the southern boundary of Compartment 14 north of Anderson Road at the southern portion of Tincher Ridge.

General Description

Compartment 14 Tract 09 is 84 acres of mostly closed-canopy mixed hardwood forest. The topography ranges from steep drainages to flat ridges. Average gradient is 45-65%.

Table 1. Overview of Forest Resources in M1409 in 2007

Overstory Sawtimber	Understory Poletimber	Regeneration Layer
White oak	Red maple	No Data Collected
Chestnut oak	Chestnut oak	
Sugar maple	White oak	
Black oak	Yellow poplar	
Pignut hickory	American beech	
Bitternut hickory	Pignut hickory	
White ash	Sugar maple	
American beech	Black oak	
Yellow poplar	Red oak	
Northern red oak	Sassafras	
Black walnut	Scarlet oak	
Shagbark hickory	White ash	
Scarlet oak	Bitternut hickory	
Red maple	Black cherry	
Black cherry	American elm	
American sycamore		
American elm		
Basswood		
Largetooth aspen		
Chinquapin oak		

History

This tract's first resource inventory was completed on 3/10/1977 by Forester Julie Akard when the tract was originally designated as Compartment 14 Tract 12. Forester Akard used the Quickcruise method for inventorying the tract and she prepared a management guide which indicated a timber volume of 2,784 Bd. Ft/ Ac. Leave, 502 Bd. Ft./Ac. Harvest, and 3,285 Bd. Ft/Ac. Present volume. In 1985 Forester Jim Allen completed the marking of the tract's southern private property lines. In the spring of 1985 Forester Allen completed a 2nd

tract inventory using a diagnostic method that indicated 5,046 BF/A of present volume that included an estimated 2,800 BF/A of harvest stocking. Forester Allen marked a timber sale of 132,194 BF of volume which was sold to Chester Hacker for $11,556 on June 6, 1985. On October 25, 1985 this sale harvest was completed. In July of 1986 a Timber Stand Improvement project was contracted to complete 4 group selection regeneration openings totaling 7.1 acres and 38 acres of non opening TSI. On October 25, 2007 Forester Sean Sheldon completed the 3rd and current resource inventory (based on an 89 acre tract) and prepared a draft management guide recommending a short time delay before harvest so that TSI of some grapevines and croptree release of oaks could be completed by contractors prior to harvest. This project covered 13.6 acres in 2 of the group selection openings and was completed in January of 2009. In 2011 the tract acreage was revised by GIS to the current tract size of 84 acres. The Sheldon draft management guide was updated and revised by Forester Spec. D. Vadas in January 2012 to propose a harvest marking and sale for the tract in CY2012.

Landscape Context

State Forest timberland lies north, west and east of this tract whereas the tract's south boundary borders private forestland. South of this private forest land some agricultural croplands have been recently planted to trees. The forest tracts to the immediate north and west are buffer tracts for Management Unit #4 which is one of 3 Control Core Research Areas for the 100 yr. Hardwood Ecosystem Experiment. The Control Core tracts in this unit are research areas that are set aside for 100 years wherein harvesting is not allowed however their wildlife populations and forest ecosystems will be researched. The intermittent stream along the tract's northeast border follows a part of the boundary for the Sweedy Hollow Nature Preserve which was dedicated in 2001. This Nature Preserve has some unique rock outcrops & cliffs and a portion of the 3 mile loop of the Low Gap Hiking Trail wanders through it. Also within 1 mile of this tract are scattered stands of planted pines of various species probably planted during the 1950's (no records found) that provide diverse wildlife habitats not commonly found on the majority of the State Forest.

Topography, Geology and Hydrology

The topography ranges from flat ridgetops to steep and moderately steep slopes at drainages. The average slope gradient is 45-65%. Most of the soils in the tract are derived from the erosion of sandstone, siltstone and shale bedrock that is mostly unglaciated. The primary drainages in this tract flow into Beanblossom Creek from Beecher Hollow and Sweedy Hollow with water resources eventually entering into the Beanblossom Creek that flows into the White River.

Soils

This tract is primarily Berks-Weikert complex (BkF) consisting of 25-75% slopes. Ridgetops are generally Wellston-Gilpin silt loams (WmC) in 6-20% slopes. West-facing hillside and bottomland flats on the tract's west portion are composed of Burnside silt loams (Bu). More detailed information about these soil types can be found in the Soil Survey of Monroe County of Indiana.

Access
Tincher Ridge Firetrail is the tract's access from off Main Forest Road being approximately 1.0 mile south of the Main Forest Road wooden gate. This access road crosses through 3 tracts before it reaches T9 which represents the last tract on the east finger of Tincher Ridge. Currently the access is gravelled halfway back and in excellent condition as T6 was harvested in 2007. The lower portion of Tincher ridge on this east finger will need additional road improvements. As Tracts 3, 7, & 8 in Compartment 14 are Control Core research tracts in the Hardwood Ecosystem Experiment, road building to access this tract is allowed as long as the roadways through the research cores are only minimally maintained.

Boundary
This tract is bounded to the east by Sweedy Hollow and to the west by Beecher Hollow. The north boundaries are two primary drainages that separate Tract 9 from Tract 8. The southern boundary is adjacent to private woodland ownership. This property line was established in 1985 by Forester Jim Allen and has had periodic remarking. Boundaries are scheduled to be remarked every 5 years and will be remarked prior to the next scheduled timber harvest.

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 on ridgetops to bottomland hardwoods near streams, as well as some scattered pine stands/plantations that were probably planted during the WPA period. This large variety of forest hardwoods and pine provides for a great diversity in wildlife cover and food resources. Shagbark hickory and American elm on site provide potential bat habitat. The Oak-Hickory component is abundant across the tract and provides modest surpluses of hard mast in good mast years. 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 also tallied during the inventory. This snag information along with the inventory data was used to compile the bat management guidelines in 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 valuable and annual mast crops for several wildlife species.
3. Log landing will be seeded and strawed. This will provide short term grassland habitat as well as some open foraging and bugging areas for furbearers and birds.

Table 2.

	Maintenance Level	Inventory	Available for Removal
Legacy Trees *			
11"+ DBH	801	1229	428
20"+ DBH	267	428	161
Snags (all species)			

9"+ DBH	534	239	-295
19"+ DBH	89	19	-70

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

Given the above data this tract has more than adequate living trees that could are available for future snags. On the other hand the observed number of snags in the 9"+ and 19'+ size classes from the inventory indicate a shortage within these 2 size classes. Therefore snags within both size classes will be retained whenever feasible during the timber marking. Additional snags can also be created in a post harvest timber stand improvement project.

Communities

A Natural Heritage Database review was obtained for this tract. If rare, threatened or endangered species 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.

Recreation

Recreation opportunities within this tract are limited due to its distance from roadways and access. The Rock Shelter Trail follows Tincher Ridge along the north adjacent tract and then heads east. The current unimproved haul road and old skid trails do provide additional hiking opportunities as well as provides areas for hunters and mushroomers to forage.

Cultural

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

Tract Subdivision Description and Silvicultural Prescription

The primary timber type is Oak-Hickory which includes a lot of Chestnut Oak on the dry ridgetops and the west slopes. The lower part of the east slope had past group selection openings (regeneration) that now contain pole-sized Yellow Poplar. The bottomland along the creek has about two acres of pine planted in it. These pine areas are Virginia and White pine and were probably planted during the 1950's in the WPA era. Fire must have burned through much of this tract in the past as a significant number of trees have advanced butt rot. Table 3 contains the 2007 inventory data for the sawtimber volume complement of the forest resource inventory.

Tract Subdivision Description and Silvicultural Prescription

Summary Data M1409 Inventory October 2007

Present Volume = **6,920 Bd. Ft./Ac.** Harvest Volume = **2,770 Bd. Ft./Ac.**
Growing Stock Volume = **4,150 Bd. Ft./Ac.**

Silvicultural Prescription and Proposed Activities

The 1985 timber sale created four regeneration openings in this tract. These areas had opening completion TSI in 1986. Following the Sheldon inventory in 2007 these openings were prescribed a combined croptree release and grapevine control project that was completed by forest contractors in January of 2009. At that time TSI was also performed in the eastern portion of tract for understory removal to encourage advance oak regeneration prior to the proposed harvest. These TSI operations have resulted in a well-spaced yet unregulated stand that has not reached maturity.

A commercial timber harvest is proposed for CY2012. The 2007 inventory indicates that Black Oak, Chestnut Oak, Yellow Poplar and Red Oak will form a large part of the proposed harvest. These species, along with White Oak, constitute the dominant overstory species within the tract. An improvement cutting prescription is planned over most of the tract to remove low quality, poorly formed or low grade timber species and favor the quality oaks, hickories and mixed hardwoods that are present. Some selection cutting will be prescribed in those stands where mature, declining and decadent stems are falling out of the overstory. Some areas of group selection may be marked so that a Property forest regeneration goal of 10% or more may be achieved for longterm health and sustainability. These groups will target stands of 1 acre or more that have modest windthrow hazard, mature timber, excessive mortality and/or fire damage, or where poor quality timber and timber species occupy sites that are understocked and unproductive. A volume over 150,000 board feet is expected in the proposed harvest.

At present the access road into the tract is in only fair condition. A Division of Historic Preservation and Archaeology (DHPA) roadwork project will be submitted to the State Forest Archaeologist for a review of the tract's cultural and historic resources. Following this review, roadwork improvements are planned to enhance the accessibility of the tract for a commercial timber harvest. The northerly portion of this roadwork improvement traverses through a Control Management Unit of the Hardwood Ecosystem Experiment (HEE) as well as along a portion of the Low Gap Hiking Trail. Minimal road improvements will be applied over these portions of the roadway so that aesthetic and research values are retained. Fortunately, most of this northern ½ mile portion of the roadwork project was improved during the M1406 timber harvest in 2007 so additional roadwork enhancements are not planned. The roadway portion that proceeds through Tract 8 and into Tract 9 is where modest improvements are needed. Additional carsonite trail signage will need to be installed after roadway improvements to maintain trail integrity and direction.

During and immediately following the harvest State Forest Best Management Practices (BMP's) will be applied to reduce soil erosion and long term impacts on forest roads. A Timber Stand Improvement project will be prescribed to complete group selection openings and address improvement and/or croptree release in unharvested areas. Grapevine control will also be prescribed in areas where vines are impeding growth and vigor of quality stands.

Table 3. Volume Estimates: Comp. 14 Tract 09

(October 2007 Inventory Data – BF per acre Values are based on an 89 acre tract)

Species	Harvest	Leave	Total
Black Oak	980	930	1,910
Chestnut Oak	800	660	1,450
White Oak	310	1,100	1,410
Yellow Poplar	220	520	740
Northern Red Oak	200	210	420
White Ash	110	140	250
Scarlet Oak	70	160	230
Pignut Hickory	0	130	130
Bitternut Hickory	20	110	130
American Sycamore	0	90	90
Shagbark Hickory	0	60	60
Sugar Maple	10	20	30
Black Walnut	10	20	30
American Beech	20	0	20
Largetooth Aspen	10	0	10
Black Cherry	0	10	10
Per Acre Totals (Bd. Ft./Ac.)	**2,770**	**4,150**	**6,920**
Tract Totals (Bd. Ft.)	**246,530**	**369,350**	**615,880**

Proposed Management Activity	**Proposed Period**
Property Boundary Remarking	CY2012
DHPA Project Review	CY2012
Roadwork Improvements	CY2012
Timber Marking	CY2012
Timber Sale	FY 2011-2012
Postharvest TSI Project	FY2012-2015
ReInventory and Management Guide	CY2027

Attachments

Included in Tract File:

- Topo Map of Tract Features
- Tract Soils Map
- INHD Review Map
- Stocking Guide Chart
- Ecological Resource Review
- TCruise Reports
- Sweedy Hollow Nature Preserve map

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 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.