

**Indiana Department of Natural Resources
Division of Forestry**

DRAFT

RESOURCE MANAGEMENT GUIDE

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| State Forest: Martin | Compartment: 1 | Tract: 5 |
| Forester: Bear | Date: 6-6-2012 | |
| Management Cycle End Year: 2022 | Management Cycle Length: 10 years | |

Location

This tract is located in the vicinity of Bear Hill and is often referred to as “Bear Hill” by property staff and some public users despite being east of the actual Bear Hill topographic feature. The specific location is Sections 9, 10, and 15, T 4 N, R 3W Martin County, IN. The tract is about two miles northeast of Trinity Springs, Indiana.

General Description

The tract consists of 83 acres, all of which is forested. Almost all the land is Oak-Hickory timber type, with only ten acres being called Mixed Hardwood. The tract contains slopes of all aspects. Generally the slopes are workable with the exception being the area of bluffs on the northern edge of the tract.

History

This tract was acquired in a land transfer with the U.S. Forest Service in October 1968. This transaction is recorded in Deed Record Book 102, pages 418-420. The Forest Service had acquired the land in September 1940 from Kenneth and Pansy Nicholson in a transaction recorded in Deed Record Book 81, page unknown.

Old management files show this tract as having been two individual tracts at one time, tracts 1 and 2. Tract 1 was the forty-acre square in the northwest corner and tract 2 was the east half, containing 44 acres. An inventory by “Erickson” completed on “tract 1” in December 1968 indicated an average of 1,710 bd. feet per acre with an average DBH of 8-16 inches. Basal area averaged 120 square feet per acre. The red and white oak groups accounted for 77 percent of the volume; the red oak group having 800 bd. ft. per acre and the white oak group having 510 bd. ft. per acre. The narrative indicated that thirty percent of the plots showed fire damage to the trees. It also recommended a light thinning, “...followed, as soon as volume permits, by an intermediate cut to release the crop trees.” No old management files were located for “tract 2”.

At some point, the two old tracts were merged into the present “tract 5”. An inventory by “Hahn”, probably done in the early 1970s, indicated 441,056 bd. ft. were present on the tract, averaging 5,728 bd. ft. per acre. Of this volume, 139,755 bd. ft. were tallied as “harvest” stock. Hahn’s management recommendations included a harvest in the east half of the tract, followed by TSI, and then a harvest in the west half of the tract in

approximately twenty years. His narrative also mentions a few, very old signs of past cutting and no evidence of past fire.

A harvest was conducted in 1973, with 113, 330 bd. ft. being removed on forty-nine acres. This harvest occurred in the southern portion of the tract and on the east side of the main ridge in the north portion of the tract. Post-harvest TSI was planned for after the sale and is assumed to have been done.

Another inventory was conducted in 2002 by Jim Lauck. This inventory estimated the growing stock to be 2,863 board feet per acre and the harvest stock to be 2,271 board feet per acre. A harvest followed the inventory in 2004. The harvest included most of tract 5 and tract 6. 1,680 board feet per acre were marked on 46 acres in tract 5. Tim Moffatt of Shoals purchased the timber or .47 per foot.

Landscape Context

Land in the area is primarily used for timber production. Land level enough to be used for agriculture generally is open and planted to row crops, hay, or pastured. The closest residential areas are the burg of Trinity Springs to the southwest and the hamlets of Indian Springs and Cale to the northwest.

Land to the south was previously owned by Kimball and used for timber production. Recently this land was sold to a private individual.

Topography, Geology and Hydrology

Two ridges dominate the topography of this tract. They join to form one ridge near north property line where the section line intersects the property line. From this point one ridge runs due south to the interior corner. The other ridge runs west south west from the junction toward the western property line. It crosses onto private property midway between the north and south property lines. The northwest corner of the tract is very steep, rocky and almost impassable. The eastern facing slope on the east side of the tract also contains some steep bluff areas. Otherwise, the topography is very workable.

The northwest corner of the tract is drained by Sulfur Creek; the remainder of the tract drains into Indian Creek.

Soils

There are two soil types on this tract, the Wellston silt loam, 6 to 12 percent slopes, eroded; and the Wellston-Berks-Gilpin complex, 18 to 70 percent slopes. Wellston silt loam, 6 to 12 percent slopes, eroded. This soil is a moderately sloping, deep, well-drained soil found on the ridge tops and upper slopes. Available water capacity is high and permeability is moderate. Surface runoff is rapid, requiring measures such as water turnouts and bars to properly remove water from roads and yards. Erosion and equipment use hazards are slight on this soil. Site index is 71 for Northern Red Oak and 90 for Yellow Poplar.

Wellston-Berks-Gilpin complex, 18-70 percent slopes. These well-drained soils are found on most of the side slopes in this tract and are characteristically deep to moderately deep. Available water capacity is very low in the Berks soil, low in the Gilpin soil and high in the Wellston soil. Permeability is moderate to moderately rapid, and surface runoff is rapid to very rapid. Erosion hazards are moderate to severe on these soils, but can be compensated for by using gentle grades for skid trails and by installing water bars and out sloping the roads to remove water. Site indices for these soils are 70 to 80 for Northern Red Oak and 90 to 95 for Yellow Poplar.

Access

Access to this tract is generally good using firelane 1B. This firelane is a dry-weather road and is maintained in good condition. It intersects Bear Hill Road at the firelane's south end. There is an impassably steep portion of the firelane that leads to the top of the ridge. This portion of the firelane is only accessible by ATV or tractor.

Boundary

Beginning at a steel post marking a Section corner, the property line goes west ¼ mile. Bits of old fencing and Kimball painted trees were found along this line. The line turns north at a heavy wooden fence post. The property line runs north for ¼ mile with fence present all the way to the northwest corner. An outhouse is present at the northwest corner. Some records indicate that there is survey pin just west of the outhouse indicating that it is on the State property. No such pin was found at the time of inventory. The property line turns east for about 3/8 mile. This line is marked by several survey pins and a bit of old fence but is difficult to follow due to the steep slopes. The northeast corner was not obviously marked. The northern stretch of the eastern line was not well defined either. Fencing was present along the southern portion of the eastern line. The interior corner on the east line was found and marked with pink ribbon. The line turns east to intersect with a drainage. Here the property line becomes a tract line and runs up the drainage to the southwest, crosses the firelane at a saddle, and follows another drainage southwest to the property line. At the western property line, the line turns north, again marked by Kimball paint to the point of beginning.

All property lines with the exception of the area of poor definition in the east were painted orange during the inventory.

Wildlife

Wildlife and signs of wildlife were very evident on the tract. Deer, chipmunk, turkey, gray and fox squirrels were observed along with numerous songbirds, hawks and vultures. The rock bluffs and outcrops provide unique wildlife habitat and will be maintained as they are. There are numerous mast-producing trees on the tract, especially hard mast. Several den trees or potential den trees were seen during the inventory.

A Snag inventory was conducted along with the timber inventory. It showed a surplus of Legacy trees and snags (standing dead trees) in all size classes.

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.

Communities

The tract is dominated by standard Oak-Hickory forest. The overstory is dominated by white oak with a strong red oak (northern, black, and scarlet) component. Occasional species include sugar maple, beech, cherry, tulip, and ash. The mid story is dominated by shade tolerant beech and sugar maple. The seedling/sapling layer is lush in area opened during the 2004 harvest. In these canopy gaps or in areas where the canopy is thin, many seedlings are present. Species include tulip, ash, sassafras, and a strong oak component on the more xeric sites. Areas with limited sunlight penetration do not have the same type of understory. Here the understory is either devoid of seedlings or dense with beech regeneration.

Recreation

No improvements exist for recreational use. The most common form of recreation on the tract is hunting for deer, turkey, and squirrel. An occasional hiker, wanderer, or gatherer may visit the tract.

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

Since the tract is almost entirely Oak-Hickory of the same age class, it will be managed as one stand. The 2004 harvest focused on improving the stand. It gave crop trees room to grow and they are still expanding to fill in the gaps. Despite the high volume per acre figure (9,300 bd. ft), most crowns have room to expand and trees are generally in good health. Any regeneration openings have come back to be dominated by tulip poplar. The poplar will dominate for the short term but is not sustainable on the majority of the tract. These openings are still very dense and contain a lot of brambles. In the next five years, they should be evaluated for thinning and or grape vine control.

The one area of exception is the northwest corner of the tract. Parts of the tract are not accessible by logging equipment due to the steep bluffs. Timber in these areas will be left to grow and buffer the unique bluff area.

The tract should be left to grow until the time of the next inventory. At that time, another improvement cut may be needed.

Proposed Management Activity

Proposed Date

Define and mark eastern property line

winter 2013

Inventory and update management plan

2022

Management Notes:

Attachments

- Aerial photo with contour lines
- Soil map
- Ecological Resource Review
- Heritage Database Map
- Wildlife Habitat Feature Inventory Report

- Stocking guide by strata
- Comprehensive stocking guide

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.