

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

**DRAFT**

**RESOURCE MANAGEMENT GUIDE**

State Forest: Martin                                      Compartment: 4                                      Tract: 3  
Forester: Bear    Date: 6-12-2012  
Management Cycle End Year: 2022      Management Cycle Length: 10 year

**Location**

This tract is located in Sections 9 and 10, T3N, R 3W, Martin County, Indiana. It is about 1 mile northwest of the forest office.

**General Description**

Tract 3 includes 112 acres of forested land. Most of the tract is north or east facing, with a smaller portion having a western aspect. Slopes are moderate to steep. The entire tract is forested with mature hardwood timber.

**History**

A portion of this tract (E1/2, NE1/4, Section 9) was purchased at a tax sale from Martin County on Feb. 8, 1932. H.W. Wood had owned the land. The remainder of the tract (W1/2, NE1/4, Section 9) was purchased from Fred and Pearl Leavens on Jan. 14, 1938.

It appears that the flatter ridgetops on the west, south and east portions of the tract had been farmed during the 20's and 30's. Portions of these abandoned field areas were planted to pines shortly after acquisition by the state. Areas not planted reverted naturally to hardwoods, mostly Yellow Poplar. About two acres on the east border of the tract were planted to red pine. About eight acres on the west and south borders were planted to jack pine.

Ben Hubbard conducted an inventory and wrote a management plan on Nov. 8, 1973. This plan recommended a harvest as soon as possible. A sale was conducted on April 22, 1975 where 126,550 bd. ft. were sold in 580 trees. Hubbard's management guide also noted evidence of extensive cutting of large timber in this area 30 to 40 years prior.

Grapevine TSI was completed on the tract in the spring of 2001.

In 2002, Jim Lauck inventoried the tract and reported 9,798 board feet per acre of total volume. Of this, 5,227 was growing stock and 4,571 was harvest stock. In November of 2003, a timber sale of 116,810 (618 trees on 75 acres) was sold to Tim Moffatt of Shoals for \$0.38 per foot.

### **Landscape Context**

This tract is part of a large (~2000 acres) contiguous block of Martin State Forest timber land. Private property to the north is forested. Large tracts of agricultural land is present north on the White River.

### **Topography, Geology and Hydrology**

This tract is basically a large cove opening to the north. The east, south, and wet boundaries are ridgetops. Slopes range from gentle to vertical cliffs. The bedrock is sandstone, and the tract drains directly into the White River.

### **Soils**

There are only two major soil types on this tract, the *Wellston-Berks-Gilpin complex, 18 to 70 percent slopes* and the *Wellston silt loam, 6 to 12 percent slopes, eroded*. The Wellston, Berks, Gilpin Complex soils are typically deep, well drained soils, with moderate to moderately rapid permeability. Available water capacity is high in the Wellston, very low in the Berks and low in the Gilpin. Surface runoff is rapid to very rapid, and organic matter content is low to moderate. The erosion hazard and the equipment limitation on these soils are severe, posing a risk during logging. These hazards can be mitigated by using appropriate BMP's and by restricting logging to dry weather.

The Wellston Silt Loam, 6-12% slopes, occurs on the gentler slopes, primarily on the ridgetops. It is a deep, well-drained soil with a high available water capacity. Permeability is moderate and surface runoff is rapid. Management concerns are slight on this soil. The pine plantations on this tract are planted on this soil.

### **Access**

This tract has excellent access thanks to fire lanes on three sides. Firelane 12 forms the southern boundary. This is a solid all-weather fire lane. Firelane 17 is present at the southern end of the eastern boundary. Firelane 18 forms the western boundary most of the way to the north property line. Log yards are maintained on all three firelanes.

### **Boundary**

Beginning at the intersection of Firelanes 12 and 18, the boundary follows Firelane 18 north out the ridgeline. As Firelane 18 turns west down the hill, the tract boundary follows the ridge to the north property line. The north line is marked by a bit of fence and a visible tree line. The line turns east along the property line across a deep drainage and up the ridge. The north line was painted orange during this inventory. One ¼ stone was found marking the center of the section line. On top of the ridge, the line turns south and becomes a tract boundary line. It runs south along the ridge to the intersection of Firelanes 17 and 12. The line turns and follows Firelane 12 west to the point of beginning.

### **Wildlife**

This tract is well suited to forest wildlife species. It is a diverse tract with ridgetops, intermittent and ephemeral drainages, brushy areas, pine patches, mature timber and water. Turkey, deer and squirrel are abundant on the tract.

During the timber inventory, a Wildlife Habitat Feature Inventory was also conducted. This inventory showed an abundance of Legacy trees in all size classes and of Snags (standing dead trees) less than 19"DBH. There was a deficiency of snags greater than 19".

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 contains oak-hickory stands with beech-maple understories, Mixed hardwoods stands with beech-maple understories, and declining pine stands with invading hardwoods. Small openings created during the 2004 harvest have regenerated to tulip poplar.

No rare or unique plant communities were found on the tract. One area of concern is the flat ridge top on the eastern boundary. This area is a reverting old field and contains a lot of Multi-flora rose.

### **Recreation**

The greatest recreation use on this tract is probably hunting. With firelanes on three sides of the tract, access is excellent for hunters.

Two of the firelanes (12 and 18) are also part of the mountain bike trail system at Martin, which is seeing increased usage. The firelanes are also used quite a bit as hiking trails. Mushroom and berry pickers also use the firelanes for access.

### **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**

For timber management purposes, this tract will be broken into two stands. The western facing slopes on the east side of the tract will form one stand and the remainder of the tract will form the other stand called the north aspect.

The western aspect contains relatively pure stands of oak. The site is of poorer quality than the north aspect. This site has the potential to support oak regeneration. Management of this stand will focus on improving existing timber quality and regenerating white oak, red oak, and hickory timber. Timber management strategies may include single tree selection, group selection, shelterwood and clear cutting.

The north aspect stand contains quite a bit of Oak-hickory timber, but also has a good stocking of sugar maple, tulip poplar, white ash, and beech. This site is much more mesic and is unlikely to sustain wide spread oak regeneration due to the competition from tulip poplar. Management tactics on this area will include all the same harvesting techniques listed for the western aspect, but the goal will be to regenerate tulip poplar and northern red oak.

Despite the fact that the stand contains large diameter trees, most of the area does not need a harvest at this time. Tree crowns still have adequate room to expand thanks to the last harvest. The single exception to this is the pine stands on both the east and west boundaries. They are of low vigor and could be harvested to regenerate hardwood timber. The acreage of these stands is not great enough to warrant a harvest at this time.

The average annual growth listed on the TM 901 is 4 board feet per acre per year. This seems very low. Typical stands at Martin range from 150 to 200. This discrepancy may be due to forester variation or the presence of several small regeneration openings.

Proposed Management Activity

Proposed Date

Evaluate 2004 openings for thinning/vine control needs

2015

Inventory and update management guide

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

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