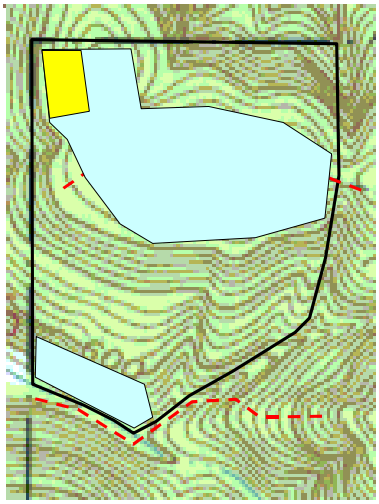
RESOURCE MANAGEMENT GUIDE
Martin State Forest

Compartment: 07 Tract: 07 Acreage: 62
Section: 26 Township: 3 N Range: 3 W

By Andy Fox and Abe Bear

ROADS AND BOUNDARIES:



This tract is bordered by private land on the north and west and joins state land to the south and east. There are two drainages that make up the eastern border. One runs north and the other south. They begin on a saddle near the center of the east line. The drainage that runs north, meets a fence about halfway down the slope, which forms the northeast corner of the tract. The south drainage flows into an intermittent stream that forms the southern border. The western border runs along the western slope of the ridge in the tract and intersects with another fence at the northwestern corner. This northern border fence runs east and west up along the high point of the ridge and then along its northern slope. Both fences separate the state forest land from that of the Survance family. Two fire lanes (marked in red dashed lines) are present in the tract and provide access for fire control, timber management, and recreation. Fire lane 7c follows the main ridge top and eventually dead-ends about 75 feet from the western border of the tract. There is a little spur off of this lane, about in the middle of the tract, that runs for a few hundred feet too a wildlife pond. Firelane 7d follows the southern border of the tract before dead ending near the western property line. An easement is currently being pursued to grant better access to the majority of Compartment 7. The proposed route would come from the east and avoid the difficult slopes in the south portion of the compartment.

TRACT DESCRIPTION:

This tract is fairly evenly split between oak-hickory forest and pine plantations with midstory and intermediate poplar. The oak-hickory timber is the dominate species type with 29 percent of the inventoried sawtimber volume. Pine plantations (marked in light blue on the map above) along with the poplar, produce 32 percent of the inventoried volume. Plantations of shortleaf, Virginia, and white pine run along the ridgetop throughout the tract. Another white pine plantation follows the drainage that makes up the southern tract border. The ridgetop plantations contain areas of very tight spacing where regeneration is limited to shade tolerant species. Due to this tight spacing, trees are tall, but diameters are small. The White pine plantation along the stream has better spacing and trees are larger.

The tract boundaries in Compartment 7 have changed over the years. The portion of tract 7 south of the ridge top firelane was previously known as Tract 9. The hardwood component of the tract contains areas of oak hickory timber where the opportunity for improvement exists and areas that need to be regenerated. Higher on the slopes, the stand contains a mix of size classes, including good quality trees of smaller diameters. These areas will improve from selection harvesting in the future. Midway up that south slope is an area in need of regeneration. Few overstory are present and they are generally of poor health. The midstory consists mostly of poor quality maple. An opening in this area would greatly improve the wildlife and timber value. There are a few areas of notable grapevines, as well as some evidence of fire. It was also noted that illegal grazing from livestock of nearby landowners had occurred,

as the fence that separates the lands was down in several areas.

SOILS:

There are three major soil types found on this tract. The most abundant of which is the Wellston-Berks-Gilpin complex, with 18-70 percent slopes (orange on the map). These well-drained soils are found on most of the side slopes in this tract and are characteristically deep to moderately deep. The surface layer is typically silt or channery silt loam and the subsoil, which is roughly 36" deep. Permeability is moderate to moderately rapid, and surface runoff is rapid to very rapid. Organic matter content in the surface layer is moderate to moderately low. Erosion hazards are moderate to severe on these soils. They can be compensated for by using gentle grades for skid trails, installing water bars, and outsloping the roads to remove water.

The second most abundant soil type found on the tract is Wellston silt loam, with 6 to 12 percent slopes eroded (red on the map). This is a moderately sloping, deep, well-drained soil found on some ridgetops and side slopes. The surface layer is typically a three to six inch thick layer of grayish brown silt loam. The subsoil is around 42 inches and is a friable silt loam. 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. The organic matter content is moderate in the surface layer. Erosion and equipment use hazards are slight on this soil.

The third most notable soil type is Burnside loam, occasionally flooded (sky blue on the map) Burnside is nearly level with deep, well-drained soil found along the stream. It is flooded for brief periods throughout the year. The typical surface layer is a nine-inch thick brown loam. A friable loam follows this over very channery loam subsoil layer that is about 20 inches thick. In some areas the surface layer is channery or gravelly, while in other places the surface layer and subsoil are silt loam. Available water capacity is low, permeability is moderate, and surface runoff is slow in this soil. The organic matter content in the surface layer is moderately low. Erosion and equipment limitation hazards are slight on this soil.

There is one other soil type present on the tract, but it only has an area of about one acre near the southwestern border. This soil, Wakeland silt loam (yellow on map) is frequently flooded, nearly level, deep, and somewhat poorly drained on floodplains. It is flooded for brief periods. Available water capacity is high and permeability is moderate. Surface runoff is slow, and organic matter content is moderate in the surface layer.

HISTORY:

This tract was purchased back in 1947 from a local couple by the name of Walton and Ella Pearl Allbright. They sold 100 acres to the state for a sum of $900.00. Since the purchase, several silvicultural operations have taken place on the tract. In Sept. of 1975 Ben Hubbard preformed an inventory and found there to be nearly 130,000 Bd. Ft. in saw-timber. In July of 1981, Hubbard conducted a timber sale on the tract. Due to the boundary change, this sale included only the area north of the ridge top firelane. DMI Furniture bought the timber consisting of 910 trees, with a total volume of 167,840 Bd. Ft. The timber was bought for a net price of $20,321.15. The area south of the ridge top firelane was last harvested in 1986. This timber was marked by Janet Eger and sold to Wabash Valley Timber.

RECREATION AND WILDLIFE:

The main forms of recreation on this tract are hunting, gathering and hiking. Long-steep slopes

and a rocky ravine provide some very scenic views for hikers. Often times large blow downs will need to be traversed to get to these outlooks. There are some exceptional sites for hunting on this tract with its many blow downs, dense understory, and varied forest types providing great cover. Forms of recreation such as ATV and horseback riding, although illegal, have been noted.

The habitat on this tract, as stated before, is excellent for many forms of wildlife such as grouse, turkey, deer and much more. Many large blow downs have opened up areas for regeneration that will provide good food sources in the future, and are providing dense cover and protection. The dominate oak-hickory forests are a great food source for multiple species. A wildlife pond located in the northwest corner of the tract supplies water year round for wildlife, as well as providing a habitat for turtles and amphibians.

WATERSHED:

The drainage on this tract is divided into two sections, both flowing off the central ridge in the tract. Half of the drainage flows from the top of the ridge north, through a collection of smaller drainages, and onto an adjacent landowners property. It then empties into a branch of Beaver Creek. The second half of the drainage flows south, again through various small drainages, to another branch of Beaver Creek. After reaching Beaver Creek, runoff ultimately flows into the East Fork of the White River.

SURROUNDING LANDSCAPE:

This parcel is located in a 577 acre block of Martin State Forest timberland. Beyond this block, the land is a mix of private, state, and National Forest. Interspersed are a few small agricultural fields and residences.

SILVICULTURAL PRESCRIPTION By: Abe Bear

Vine TSI is highly recommended in this tract, as there were many areas of grapevines extending out from the large number of blow downs.

The ride top pine plantations on this tract are very dense and must be thinned to be of any value as timber or as a nursery for oak regeneration. A standard row thinning should be coupled with a hardwood harvest on the tract. The rows are no longer visible, but the thinning should be conduced as if they were. Strips of trees approximately 15 feet wide should be removed with about 30 feet between strips. This will mimic a standard third row thinning. Select trees may be harvested from within the residual strips of pine. The result of this thinning will be an increase in the amount of baffled sunlight reaching the forest floor. This light should allow the regeneration of oak seedlings. When the seedlings are established, the remaining pine can be harvested.

The hardwood portion of the tract should be managed via a combination of single tree selection and regeneration openings. Trees of good quality are present high on the south slope and on the north slope north of the pine. These areas will benefit from single tree selection improvement harvesting. The south slope contains an area of 5-10 acres of poor vigor trees. Overstory trees are scattered and are in poor health. The primary regeneration is sugar maple and beech. A regeneration opening on this site will spur shade intolerant regeneration such as oak, tulip, and cherry.

The 2006 inventory lists harvest stock at 2,830 bd. ft. per acre. The actual harvest volume will likely be higher due to the pine thinning and regeneration openings.

Specific Practices For Accomplishment
By: Andy Fox and Abe Bear

Year Planned	Practice	Year Accomplished
2009	Vine TSI	
2009-2010	Timber harvest (Approx. 3,500 - 4,000 bd. ft. per acre)	
2010-2011	Post harvest TSI	

Indiana Division of Forestry
Forest Resource Management
Wildlife Review Checklist – Revised April 2005

Date of Review:	6/13/06		
State Forest:	Martin State Forest		
Inspected By:	Andrew S. Fox		
Compartment:	C7	**Township:**	3 North
Tract(s):	T7	**Range:**	3 West
Total Acres:	69	**Section(s):**	26

1. Does the Natural Heritage Database identify any Endangered, Threatened or Rare species or "significant areas" documented from this tract or nearby?

2. Describe the vegetative cover/land use matrix within a 2.5 mile radius of this tract:

   a. A majority of the land within the matrix area is __ publicly owned, _X_ privately owned. (mark one)

   b. Which of the following land cover types are present in the matrix area (mark all that can be easily identified as present from aerial photos, use two marks to identify the most prevalent type)?

      _XX_ Closed-canopy forest
      _X_ Brushy/early successional areas
      _X_ Open fields
      _X_ Open water
      __ Developed areas

   C. Does tract contain any habitat/habitat type, which is otherwise missing or poorly represented within the 2.5 mile radius matrix area? Yes/No

   No

   If yes, explain:

   D. Has the land use pattern within the matrix area shown obvious significant change within the last 15 years? Yes/No

   No

   If yes, explain:

3. Have there been documented sightings or other evidence of current or recent past (20 years) occurrences of rare, threatened or endangered species within this tract?

No

4. List the expected short term (<5 years) and long term (>5 years) effects the proposed forest resource management activities will have on the following **habitat types within this tract**:

A. Closed canopy forest

Short term: A decrease of the canopy cover any where from 0-20%, except in areas where regeneration openings are made, which will remove all canopy cover.

Long term: None except in regeneration areas.

B. Understory woody vegetation

Short term: An increase in the growth rates and density of vegetation in areas that are have more light and moisture penetration due to canopy loss. This will especially be true in shade-intolerant species.

Long term: Same as above with effects diminishing as the canopy closes.

C. Herbaceous vegetation

Short term: And increase in growth rates and density in area of greater canopy open, due to more light and moisture.

Long term: Same as above, effect will be diminishing as canopy closes.

D. Streams, Lakes and Ponds

Short term: None

Long term: None

E. Subterranean None

5. List any conditions that would suggest that the management proposal for this tract would require further evaluation by any additional wildlife management specialists?

N/A

6. Were any additions, changes or amendments made to the proposed forest resource management activities specifically to enhance or protect wildlife populations or wildlife habitat?

No

If yes, explain:

Additional Comments:

none

Evidence of the following species were either observed or heard during the field review of tract(s):
Turkeys, deer, squirrel, frog, various birds, turtles

Date: 8/3/06 **Compartment 07** **Tract 07**

ADDENDUM TO ADDRESS INDIANA BAT MANAGEMENT STRATEGY

(Discuss any adjustments to management activities that are needed to comply with guidelines.)

GUIDELINES--

- *3 live trees per acre 20+ inches DBH and (an additional) 6 live trees per acre 11+ inches DBH (of species with desired characteristics.(i.e. – shagbark, shellbark and bitternut hickory, black, green and white ash, shingle, post, white and northern red oak, slippery and American elm, black locust, eastern cottonwood, silver maple and sassafras).*
- *5 snags per acre 9+ inches DBH and (an additional) 1 snag per acre 19+ inches DBH.*

Snag Trees

The inventory indicated that there were a total of 0 snag trees, of the preferred species, per acre greater than 9" DBH; bat management plan guidelines call for five trees per acre. The inventory also showed that there were 0 trees per acre of a DBH at 19" or greater of the preferred species; the guidelines call for one per acre.

In order to comply with the bat management plan 5 sang greater than 9" will be created per acre, and in addition one snag tree 19" or greater will be created per acre. These trees will be marked and deadened as part of the post harvest TSI operation.

Live Trees

The bat management guidelines call for at least three live trees of preferred species per acre greater than twenty inches DBH and an additional six live trees per acre greater than eleven inches DBH. The inventory indicated that there are 7.8 trees of preferred species greater than 11" DBH per acre and 1.7 trees per acre greater than 20" DBH in the leave category. To bring this tract into compliance with the bat management policy adjustments such as leaving two additional trees 20 inches DBH per acre.

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 "Martin C07 T07" 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.

TM 901 **Date: 12-15-08**

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Compartment: 7	**Tract: 7**	**Stand: Total**	
County: Martin	**Section: 25,26**	**Township: 3N**	**Range: 3W**

Comercial Forest	67	**Average Site Index**	93
Non-commercial Forest	0	**Average Annual Growth**	
Recreational Use	0	**Total Basal Area**	111
Permanit Openings	0	**B.A.-Trees > 14"**	51
Other Openings	0	**B.A.-Trees < 14"**	39
Total Acres	67		

Species	**Saw Timber Leave**	**Saw Timber Harvest**	**Saw timber Total**
Yellow Poplar	60,160	32,690	92,850
White Oak	38,410	22,720	61,130
Eastern White Pine	2,210	15,800	18,010
Red Maple	2,210	15,230	17,440
Sugar Maple	9,880	14,480	24,360
American Beech	0	13,570	13,570
Pignut Hickory	21,160	12,100	33,260
Black Oak	6,380	10,050	16,430
Shagbark Hickory	8,350	9,620	17,970
Northern Red Oak	10,340	9,070	19,410
White Ash	0	7,340	7,340
Blackgum	4,190	4,020	8,210
Black Cherry	0	3,830	3,830
Pin Oak	5,770	2,820	8,590
Scarlet Oak	3,590	2,090	5,680
Largetooth Aspen	3,260	0	3,260
Black Walnut	1,680	0	1,680
Shortleaf Pine	1,550	0	1,550
Totals (tract)	179,140	175,430	354,570
Total (per acre)	2,674	2,618	5,292
Percent Oak/Hickory	31%	26%	29%
Percent Beech/Maple	7%	25%	16%
Percent Yellow-poplar	34%	19%	26%
Percent Pine	2%	9%	6%