TM902

RESOURCE MANAGEMENT GUIDE

Forester: Jim Lauck
State Forest: Martin State Forest
Township: 3 North
Total Acres: 101

Cruised by: Michael Ranniger
Compartment: 05
Range: 3 West

Date: 5/29/07
Tract: 08
Section(s): 10 & 15

FORESTER'S NARRATIVE

By Michael Ranniger

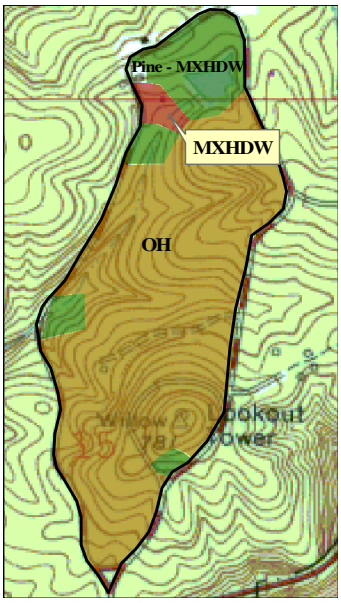
ROADS AND BOUNDARIES:

The forest loop road makes up the full boundary line for this tract. It is paved asphalt, well- traveled road. The tract also contains the tower loop road, the trail leading to the tower, and the trailside shelter and foot trails. The tower and shelter trails are maintained gravel.

SPECIAL FEATURES:

This tract includes the office/shop area, Martin Lake, half of the Woodland Education Trail, the trailside shelter, the arboretum, the fire tower, and two power lines. It borders the picnic and campground areas. The trails, lake, and tower areas receive intensive recreational use.

TRACT DESCRIPTION:

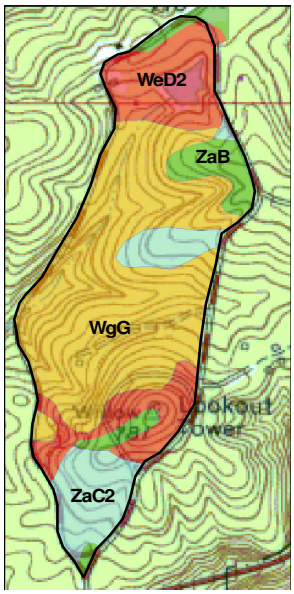


A heavy rainfall in early 2007 created numerous drainages ditches and eroded away parts of the streambed that runs through the middle of the tract. Hillsides draining towards the streambed on both sides showed heavy erosion. Numerous trees were uprooted and felled along this route.

The dominate forest type on this tract is oak-hickory, (colored brown on the map) which makes up about 85 percent of the sawtimber inventoried. Mixed hardwood (colored red on the map) and pine-hardwood mix (colored green on the map) were the other forest types showing up on this tract. In the pole size class the oak-hickory was also the dominant forest type as well. Grapevine showed up on the northern and southern areas of this tract. The middle area of the tract showed previous TSI work and vines were rarely seen.

The tract is made up of mostly small to medium age trees, with about a fourth to a third of the trees now reaching a harvestable size again.

SOILS:



One half of this tract is underlain by Wellston-Berks-Gilpin (WgG) complex, with 18-70 percent slopes. It is colored 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. 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.

About 20 percent of this tract is underlain by Zanesville silt loam (ZaC2), with 6 to 12 percent slopes eroded. This soil is coded blue on the map and is found on some ridgetops and upper side slopes. It is a moderately sloping, deep, well to moderately well drained soil. This is underlain by a silt loam fragipan, which restricts root penetration and downward water movement. This restriction to water movement often results in saturated soil conditions in the winter and spring. Available water capacity is moderate, and permeability is moderate above and slows in the fragipan. Surface runoff is rapid. Hazards and equipment limitations are slight for this soil; however, winter/spring logging may be restricted due to the saturated soil conditions.

Another 20 percent of this tract is underlain by Wellston silt loam (WeD2), with 12 to 18 percent slopes eroded. This soil is coded red on the map. This sloping, deep, well-drained soil is found along slopes along drainages in upper lands. The available water capacity for this soil is high with moderate permeability, with very rapid surface run off. Erosion will be a limiting factor when it comes to logging operations, as this soil is highly erode-able.

About 10 percent of this tract is underlain by Zanesville silt loam (ZaB), with 2 to 6 percent slopes. It is coded green on the map and is found on the ridgetops. It is a gently sloping, deep, well drained to moderately well drained soil. A firm fragipan, which restricts root penetration, exists in the lower part of the subsoil. Available water capacity is moderate and permeability is moderate above the fragipan and slow in the fragipan. This slow permeability restricts downward water movement through the soil and often results in the soil being saturated in the winter and spring. Surface runoff is medium. Organic matter content in the surface layer is moderate.

HISTORY:

Purchase history for this tract is currently unknown at this time. Inventories were done on this tract in 1952, 1973, 1986, and 2007. A timber harvest was completed on this tract in 1988. The gross was $40,392.00. 274 trees were sold with a net volume of 87,998 BF.

RECREATION AND WILDLIFE:

There are several forms of recreation on this tract, the main of which is fishing on Martin Lake. Martin Lake, stocked with bluegill, bass, and catfish, is a popular fishing spot among the local residents. Other forms of recreation include hiking and gathering. The fire lanes and trails in and around this tract make for good hiking, and the range of habitats makes it great for wildlife. Different habitats such as a pine plantation, Martin Lake, and hardwood forests make this tract quite suitable for various wildlife species. The trails leading to the tower and trailside shelter are maintained gravel trails.

Several species of game and non-game wildlife can be found in this tract, although many are only transients (deer, turkey, etc.), preferring to feed, but moving to nearby areas for rest and shelter due to the habitat and numbers of people. Several dead snags provide lookouts for hawks and owls, and the abundance of oak trees provides mast for squirrels and a variety of other animals. Rabbits are occasionally found around the office complex and arboretum.

A Review of the Natural Heritage Database indicated a recent report of a Worm-eating Warbler

(1993) within one mile of this tract. Any proposed forest management would not impact habitat for the worm-eating Warbler.

INVASIVE SPECIES:

Generally invasives are not a problem on the tract. Small populations of garlic mustard, bush honeysuckle and multi-flora rose are present, but are being controlled on an annual basis. The proximity to the office and high visibility makes combating invasives both a priority and customary activity.

WATERSHED:

The majority of this tract drains west, and to the middle of the tract, into a small stream. There are three main drainage slopes meeting on the west side. They combine and flow west, under the forest loop stone bridge. This stream flows southwest to join Beaver Creek, which flows into the east fork of the White River. Martin Lake is located in the northeast corner of the tract. The lake has about a 10 acre watershed.

SURROUNDING LANDSCAPE:

This tract is part of the main Martin State Forest block and is completely surrounded by wooded state forest land. On a larger scale, the surrounding land use is mostly forested with some scattered agricultural, residential, and industrial land.

SILVICULTURAL PRESCRIPTION

By: Abe Bear

Several factors make the silvicultural prescription of this tract different than most of the state forest property. The high level of recreational use and visibility restrict silvicultural options. On the other hand, the high visibility and recreational use allow for an opportunity to educate the public on sound timber management. The 1988 harvest was successful in improving the quality of the stand and providing such educational opportunities.

At this time, the stand is just reaching its turn in the 20 year rotation of timber harvest. No plans are in place to harvest on this tract simply due to the fact that other tracts in on Martin State Forest will benefit more from harvest. When it is time to harvest from this tract (likely in the next 10 years) the cut will be rather light and efforts will be made to create educational tools to coincide with the harvest. In the interim, the quality of the stand will be maintained by controlling grapevines and invasive species.

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 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.

TM 901

Forester: Jim Lauck
Cruised by: Michael Ranniger
& Darren Bridges

Date: 5/29/07

RESOURCE MANAGEMENT GUIDE

STATE FOREST: Martin COMPARTMENT: 05 TRACT: 08

INVENTORY SUMMARY

ACREAGE IN:

Commercial Forest: 96		Average Site Index:	83.0
Non-Commercial Forest: 1 (office)		Average Annual Growth	NA
Recreation Use: .5 (roadside shelter, fire tower)		Total B.A. / Acre	105.0
Permanent Openings: 3 (Martin Lake)		B.A. - Trees ≥14"	37.3
Other Openings: .5		B.A. - Trees <14"	67.7
(NE shed area, South entrance triangle)			
TOTAL AREA: 101			

(Estimated Tract Volumes for Commercial Forest Area - Bd. Ft., Doyle Rule)

Species	Growing Stock	Harvest Stock	Total Volume
Black Cherry	-0-	-0-	-0-
Blackgum	-0-	5,060	5,060
Black Oak	118,080	88,330	206,410
Black Walnut	4,960	-0-	4,960
Eastern White Pine	73,560	20,890	94,450
Pignut Hickory	42,930	21,730	64,660
Northern Red Oak	35,940	25,870	61,810
Red Elm	4,590	-0-	4,590
Red Pine	-0-	-0-	-0-
Sassafras	-0-	-0-	-0-
Scarlet Oak	-0-	6,900	6,900
Shagbark Hickory	5,740	17,060	22,800
Sugar Maple	6,780	-0-	6,780
White Ash	-0-	4,900	4,900
White Oak	245,620	4,315	249,935
Yellow Poplar	25,090	-0-	25,090
TOTALS (tract)	563,290	195,055	758,345
TOTALS (per acre)	4,941.1	1,711.0	6,652.1

TM 903 Date: 1-27-10

RESOURCE MANAGEMENT GUIDE

Compartment: 5 Tract: 8 Acreage: 101
County: Martin Section: 10 & 15 Township: 3N Range: 3W

Specific Practices For Accomplishment
By: Abe Bear

Year Planned	Practice	Year Accomplished
Annually	Maintain recreational trails, Martin Lake, fire tower and educational signs.	
	Control invasive species	
2015-2020	Re-inventory and consider light harvest	