DRAFT
RESOURCE MANAGEMENT GUIDE

State Forest: Morgan Monroe Compartment: 09 Tract: 11
Foresters: H. Hefner/D. Vadas Date: 3/10/2009
Management Cycle End Year: 2029 Management Cycle Length: 20 years

Location

This tract is located in section 36 of T11N, R1E of Morgan County Indiana and section 1 of T10N, R1E of Brown County Indiana. This area is commonly referred to as Compartment 09 Tract 11 of the Morgan-Monroe State Forest. It is located approximately 1 mile south of Mahalasville, IN and 6 miles southeast of Martinsville, IN.

General Description

Tract 11 contains 80 acres of which 79 are commercial forestland. The non-commercial acre consists of a log yard and skid roads. The tract is predominantly closed canopy forest composed of mostly oak-hickory and lower sideslope/bottomland mixed hardwoods. Slopes vary from level on the ridgetops and bottomlands to moderately steep sideslopes. This tract is located in the northern portion of the Brunner Tract Forest & Wildlife Management Unit. Forest management practices within this portion of the State Forest are directed toward creating and maintaining an assortment of early successional wildlife habitats such as old fields, warm season grasslands and early successional timber stands. Large openings (greater than 5 acres) are permissible within this tract if silviculturally warranted.

History

The Monroe County portion of this tract was purchased from Mr. Yates in 1940. The United States Government deeded the Brown County portion of the tract to the Yellowwood State Forest in 1956. Some black locust & Jack pine were planted by a CETA forester in 1975 in the area (450 trees of each variety). A TIMPIS inventory was completed on 3-4-85 on a 63 Acre tract by Forester Unversaw. The east private boundaries were posted and painted in March of 1985 by Forester Vadas following a firewood encroachment in the north bottomland. A timber harvest on old Y1401 &Y1403 by Yellowwood State Forest overlapped the southern half of this tract in 1989. This timber was sold to Imperial Lumber Kiln and generated $40,516.00. In February of 1990 TSI was completed on 2 regeneration openings by YSF staff. On April 19, 1990 25 BLW seedlings were planted by YW staff within each of the 2 openings to enrich the regeneration. A straight line wind damage event occurred within the tract in the summer of 1990 however a salvage harvest was not conducted due to the limited damage. In 1996 the boundaries of the tract were redrawn to the current configuration when Yellowwood and Morgan-Monroe State Forests were combined. Portions of the northern tract area have had limited timber management since State acquisition.

Topography, Geology and Hydrology

This tract consists of two ridgetops and ravines with mainly north and northeast aspects. The ridges are relatively flat with moderately and extremely steep side slopes. There is an intermittent creek on the tract that runs into Bear Creek. Bear Creek runs into Indian Creek, which is a tributary of the White River. The underlying geology of the tract is shale and sandstone.

Access

This tract is accessed by a fire trail off of Bear Creek Road. The access road is in good condition and has recently had a modest amount of stone improvement. The access improvements have increased recreational activity as well as provide for public firewood areas.

Boundary

The east boundary of this tract is also a property boundary line. The south tract boundary line follows a ridgetop. The north/west boundary follows a ravine and intermittent creek. The state-painted boundary lines bordering private property will be honored for this tract's management.

Soils

Berks channery silt loam (BfG) 35-80% slope. Approximately 70% of the tract. Deep moderately well drained soils. Moderate permeability with high water capacity. Slight harvest limitations due to steep slopes. Site index for Red Oak is 71, Yellow Poplar is 90 and Virginia Pine is 70.

Wellston silt loam (WfC) 6-12% slope. Approximately 20% of the tract. Moderately sloping and well drained soils. High available water with moderate permeability. This soil type is known to have a fragipan. Site index for Red Oak is 71, Yellow Poplar is 90 and Virginia Pine is 70.

Wellston-Gilpin Silt loam (WeC2) 6-20% slope. Approximately 10 % of the tract. Moderately steep slopes with well-drained soils. Minimal harvest limitations but this soil type is known to have a fragipan. The soil is very erodible but has moderately high productivity. Site index for Yellow Poplar is 90 and Red Oak is 71.

Wildlife

Wildlife resources in this tract are plentiful. This tract supports many woodland species including, but not limited to: White-Tailed Deer, Wild Turkey, Eastern Grey Squirrel, Fox Squirrel, chipmunks, hawks, owls, woodpeckers, and various songbirds. Sandhill cranes were seen migrating north during the inventory.

Wildlife Habitat Feature Tract Summary

	Maintenance Level	Optimal Level	Inventory	Available Above Maintenance	Available Above Optimal
Legacy Trees *					
11"+ DBH	720		1192	472	
20"+ DBH	240		383	143	
Snags (all species)					
5"+ DBH	320	560	773	453	213
9"+ DBH	240	480	304	64	-176
19"+ DBH	40	80	9	-31	-71
Cavity Trees (all species)					
7"+ DBH	320	480	994	674	514
11"+ DBH	240	320	728	488	408
19"+ DBH	40	80	240	200	160

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

Large snag trees as determined by the Indiana Bat guidelines are underrepresented according to the inventory. Following the Indiana Bat guidelines 31 snag trees would need to be created in the 19"+ diameter class. Timber stand improvement (TSI) is planned after the harvest is completed.

Deadening standing timber in group selection openings as well as releasing non opening crop trees by girdling competing trees is planned following the harvest. These deadened trees will increase the snag tree count in the future timber stand.

Exotic Species

Multiflora rose and garlic mustard were found on the site during the inventory. MF rose has become naturalized throughout the Forest. The garlic mustard infestation will be monitored and treatment to reduce or eliminate this plant will begin in spring of 2009.

Communities

The Natural Heritage Database did not report any rare, threatened, or endangered species within the tract. The Kirtland's Snake (Clonophis kirtlandii) is known to occur in adjacent tracts to the southwest and southeast however suitable habitat for the snake was not found within this tract.

Recreation

Due to the improved access road into this tract greater opportunities exist for recreational users. There are no established recreational facilities but some of the more common recreation activities may include: hunting, hiking, birding, wildlife watching & mushroom hunting. Deer hunting appears to be especially prevalent as several tree stands were observed during the inventory.

Cultural

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

Tract Silvicultural Prescription

The predominant timber type within this tract is oak-hickory. Dominant species composition within the tract is as follows: chestnut oak 31%, white oak 18%, black oak 15%, scarlet oak 12%, red oak 9%, yellow-poplar 6% and hickory (includes shagbark, pignut and bitternut hickory) 5%. According to the most recent inventory data the estimated tract volume per acre is 8,880 BF/acre. The estimate for harvest is 3,800 BF/acre with a leave volume of 5,080 BF/acre. This should translate into a modestly large planned timber harvest of about 200,000 BF. Overall, the tract's Basal Area is 114.3 Sq.Ft./acre. The average number of trees per acre is 95.3. According to the Gingrich stocking table the present stand is fully stocked at 83%. Understory regeneration within the tract is dominated by American beech and sugar maple. This tract will be managed under uneven-aged management, meaning that singletree selection and group selection can occur throughout the tract. Based on the current condition an intermediate harvest is recommended over the majority of the tract to improve the quality of the stand. There are places in the tract that have evidence of fire damage. There is an old opening on the tract that is less than one acre. The opening could be expanded during a harvest to make it better for wildlife. Opening(s) less than ten acres in size will provide regeneration of shade intolerant species. These opening(s) will be located within the tract as determined by the marking forester. Throughout the entire tract single tree selection will focus on removing

damaged and mature trees, to improve the growth of younger and healthier trees. A species and volume summary of the present tract inventory is listed in the following table.

M0911 Harvest/Leave by Species and Volume			
Species	**Harvest**	**Leave**	**Total**
American Beech	0	1,090	1,090
American Sycamore	0	3,850	3,850
Bitternut Hickory	0	5,000	5,000
Black Oak	37,170	68,120	105,290
Chestnut Oak	119,450	99,480	218,930
Eastern Cottonwood	0	2,580	2,580
Largetooth Aspen	8,280	3,180	11,460
Northern Red Oak	11,300	51,670	62,970
Pignut Hickory	10,490	15,720	26,210
Red Maple	2,430	320	2,750
Sassafras	0	870	870
Scarlet Oak	55,550	28,490	84,040
Shagbark Hickory	0	2,550	2,550
Sugar Maple	1,880	6,890	8,770
White Ash	7,280	0	7,280
White Oak	25,960	101,510	127,470
Yellow Poplar	24,000	15,170	39,170
Tract Total Volumes	**303,790**	**406,490**	**710,280**
Per Acre Averages	**3,797**	**5,081**	**8,879**

Tract Proposed Activities

Boundary marking will occur in the spring of 2009. A tract map with layout of yards, skid trails, and haul roads is being submitted to the DOF Archaeologist for an archaeology review. Timber marking is planned for late April 2009. Exotics encountered during the marking will be treated. As timber is marked grapevines will be cut as part of pre-harvest TSI. Additional roadwork is not planned at this time as the present roadwork is suitable. Upon sale approval, a sale date will be schedule in 2009 and will have a contract length of two years. Post harvest TSI will be performed after completion of harvest operations. The tract is scheduled for another inventory in the year 2029.

Harvesting timber will change some of the overstory species composition and density. Canopy gaps will stimulate residual canopies and understory plants as the result of increased light to the forest floor. Modest ground cover exposure to mineral soil will stimulate some early successional species growth and development. Soil loss will be minimized as BMPs are applied to log yards and water bars on skid trails. Seed and/or straw applied to the yard and skidtrails will significantly reduce soil movement. The skid trails and haul roads will quickly re-vegetate in the year after harvest operations cease. Little to no impact to water quality should occur as the use of Best Management Practices (BMP) will greatly reduce runoff from entering streams. Recreation use of the tract will be limited while harvest operations are occurring; this measure is taken to provide for the safety of recreation users and timber harvest operators. Wildlife populations of early to mid successional groups will increase for a short period as a result of the harvest. Regeneration openings will promote residency and population increases of wildlife species that thrive in early successional habitats.

Proposed Management Activities Timeline

Proposed Management Activity	*Proposed Date*
Boundary Marking	2009
Timber Marking	2009
Timber Sale	2009
TSI Work	2010/2011
Tract Reinventory	2029

Found in Tract File
Topographic map with tract subdivisions
Aerial photo with tract subdivisions
Soil type map of area
Tcruise reports

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