Indiana Department of Natural Resources - Division of Forestry

RESOURCE MANAGEMENT GUIDE

Morgan-Monroe State Forest Compartment **16** Tract **22**
Total Tract acreage: **56** Commercial Acres: **56** Date: **12/17//10**
Forester: **T. Tompkins**

Location
Tract 22 is located in Monroe County within Sections 29&30, T9N, R1E.

General Description
The cover type within this tract is primarily mixed hardwood with a large oak component. One White Pine stand is located in the bottomland on the north side of the tract and is approximately 2 acres. Below are the tree species in each size class found by the 2010 inventory. (listed in descending order of occurrence):

Sawtimber	Poletimber	Sub-Merchantable
White Oak	Sugar maple	Sugar maple
Sugar Maple	Sassafras	American Beech
Yellow Poplar	Pignut hickory	Sassafras
Red Oak	American Beech	Red maple
American Sycamore	Blackgum	Black ash
Black Oak	Bitternut Hickory	
Bitternut Hickory	Red Maple	
White Pine		
Red Maple		
Pignut Hickory		
Black Walnut		
Black Cherry		
Largetooth Aspen		
Shagbark Hickory		
Sassafras		
Blackgum		
White Ash		
Scarlet Oak		

History
Resource management history for Tract 22

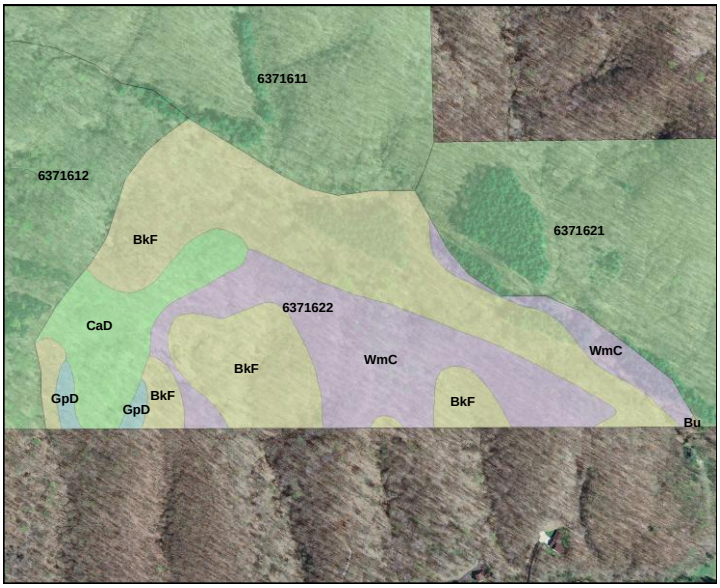
09/20/1978	60,950 Bd. Ft. Marked & sold by Bill Hahn to Crone Lumber Company for $4,187.22
1986	Property line survey completed by Vollmer along S line of SE1/4
11/16/2010	Inventory completed by Intermittent Forester Tompkins.

Landscape Context
This tract is surrounded by State Forest land on three sides and borders private forestland along the south boundary. Some adjacent landowners have residences along Kerr Creek Road.

Topography, Geology and Hydrology
The tract is comprised of about 22% ridgetop, 14% bottomland, and the remaining acreage covers all slope aspects with slopes ranging from 5-65%. The soil types noted in the next section are unglaciated soils and have formed from the bedrock material of

sandstone, shale and siltstone. A perennial stream makes up the northern boundary of this tract. This stream drains into Kerr Creek and then into Monroe Reservoir

Soils



BkF	Berks-Weikert complex.	25 – 75% slope	Sandstone-Bedrock – 38”
SI – 70	Well drained. Most areas in woodlands. Soil suited to trees.		
30.82 Acres	Severely limited for dwellings with basements due to slope and bedrock.		
WmC	Wellston-Gilpin silt loam.	6 – 20% slopes	Bedrock – 46”
SI – 71	Well drained. Many areas in woodlands. Well suited to trees. Limited		
17.31 Acres	for building sites. Severe hazard to erosion due to silt loam soil content.		
CaD	Caneyville silt loam.	12 – 18% slope	Limestone-bedrock – 35”
SI – 70	Well drained. Woodland best use for this soil. Soil suited to trees.		
7.07 Acres	Severely limited to dwellings due to steepness of slope		
GpD	Gilpin silt loam.	12 – 18 % slope	Sandstone-bedrock – 36”
SI – 73	Well drained. Most areas in woodland. Soil well suited to trees.		
0.85 Acres	Erosion major hazard. Permeability moderate. Severely limited to buildings and absorption fields.		

(Note: Building skid trails on the contour and constructing water bars are measures that can be taken to reduce erosion potential. SI = Site Index.)

Access

There is no direct road access into this tract however access is available through tract 12. Tract 12 borders a county roadway that is located off of Mount Gilead Road. This county road access was corroborated by the DNR Surveyor Vollmer in 1986

Boundary

Tract is surrounded by State Forest acreage with exception of the southern line that borders private forestlands. This tract’s property lines were surveyed the DNR Surveyor Bob Vollmer in 1986. This survey was in response to an adjacent landowner boundary complaint and to clarify the tract’s western access. All lines were painted in orange and the corners referenced following the survey completion. Boundary line maintenance is up to date with lines last painted in 2011

Wildlife

Wildlife resources in this tract are abundant. Common species which are present include: squirrels, white-tailed deer, turkey, coyote, various small furbearing animals, and a variety of

songbirds. The inventory for this tract included recording structural habitat features at each data point; these records include snag (dead, standing tree) counts. The results of these collected data for snag counts are included on the bat guidelines form for this tract. \

Legacy trees*	**Maintenance level**	**Inventory**	**Available above Maintenance**
11″ + DBH	504	1415	911
20″ + DBH	168	348	180

*Species include American elm, Bitternut hickory, Cottonwood, Green ash, Red oak, Post oak, Red elm, Shagbark hickory, Shellbark hickory, Silver maple, Sugar maple, White ash and White oak

Snags (all species)	**Maintenance level**	**Optimal level**	**Inventory**	**Available above Maintenance**	**Available above Optimal**
5″ + DBH	224	392	324	100	-68
9″ + DBH	168	336	201	33	-135
19″ + DBH	28	56	6	-22	-50

Cavity trees (all species)	**Maintenance level**	**Optimal level**	**Inventory**	**Available above Maintenance**	**Available above Optimal**
7″ + DBH	224	336	193	-31	-143
11″ + DBH	168	224	99	-69	-125
19″ + DBH	28	56	18	-10	-38

Communities

A Heritage database review was submitted for this tract. No RTE or species of special concern were noted within tract on the review. One rare listed species, Trailing Arbutus, has been documented on nearby private acreage. There is a White pine component in the tract that provides additional wildlife value and forest diversity.

Invasives/Exotics

No exotics were noted during the inventory. Modest grapevine control is needed in portions of the tract and this treatment would be completed prior to the tract's harvest.

Recreation

As this tract is not directly accessible by the public, the area is not used heavily. In the event this tract is marked and sold the adjacent tract 12 could be enhanced to improve access for additional hunters, hikers and wildlife viewers. At present only limited use of the land by the adjacent property landowners for hiking and hunting has been observed.

Cultural Resources

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.

November 2010 Inventory Data

Volume estimates **Basal Area per Acre(includes sub-merch. stems)**

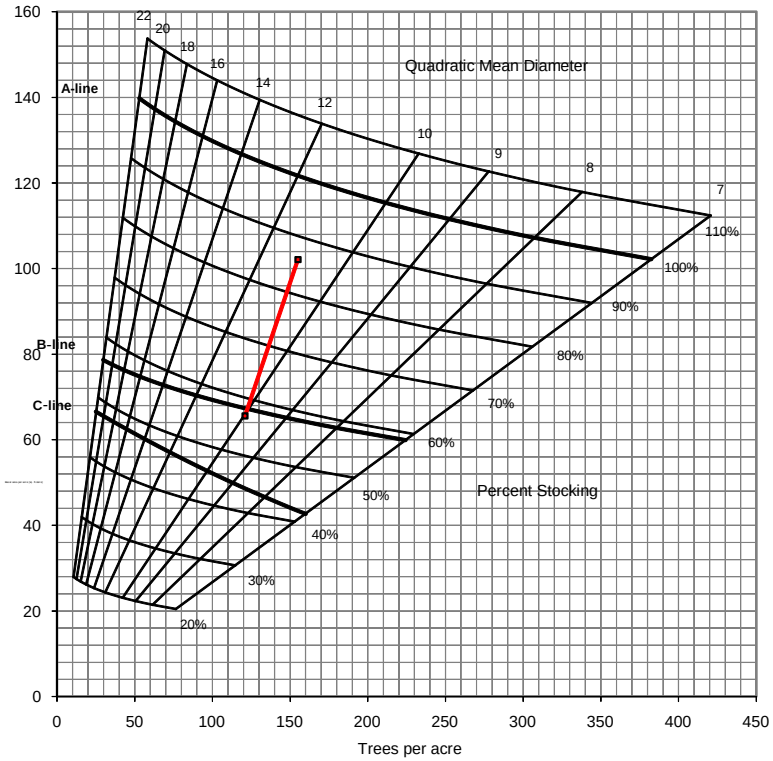
Harvest volume: 3,474 Bd. Ft./acre 35.9
Leave volume: 6,342 Bd. Ft. /acre. 65.6
Total tract: 9,873 Bd. Ft./acre 102.1

Harvest/Leave Report Summary
MBF=1000 board feet

SPECIES	HARVEST MBF	LEAVE MBF	TOTAL MBF
White Oak	36.74	79.98	116.72
Northern Red Oak	0.0	75.64	75.64
American Sycamore	36.05	29.68	65.73
Eastern White Pine	20.19	41.27	61.45
Yellow Poplar	36.85	18.85	55.7
Sugar Maple	22.49	24.87	47.36
Black Oak	19.91	26.18	46.09
Bitternut Hickory	0.0	28.83	28.83
Black Walnut	0.0	9.37	9.37
Shagbark Hickory	0.0	7.59	7.59
Largetooth Aspen	7.39	0.0	7.39
Pignut Hickory	0.0	5.47	5.47
Black Cherry	0.0	5.06	5.06
White Ash	4.47	0.0	4.47
American Beech	4.37	0.0	4.37
Red Maple	2.54	0.0	2.54
Scarlet Oak	0.0	2.36	2.36
Blackgum	2.22	0.0	2.22
Sassafras	1.34	0.0	1.34
Totals			
PER ACRE	3.47	6.34	9.87
TRACT TOTAL	194.54	355.15	552.88

Discrepancies due to rounding.

Hardwood Stand Acreage	56 acres		Present Volume per Acre	9,873bd. ft.
Basal Area per Acre	102.1 sq. ft.		Harvest Volume per Acre	3,474 bd. ft.
Number Trees per Acre	155		Residual Volume per Acre	6,342 bd. ft.
Stocking Percentage	88%		Average Tree Size	9.0″ dbh.



Tract Prescription and Proposed Activities

This tract is comprised primarily of mixed oak/hickory stands with one White Pine stand of approximately 2 acres. The inventory results indicate this tract would sustain and benefit from a harvest this cutting cycle. My recommendation is for an intermediate, improvement harvest utilizing single-tree selection as well as the application of group selection openings. It is also recommended that approximately 17 acres of the stand that contains the larger mature oaks be prescribed a shelterwood harvest to regenerate the oak. The White Pine stand is of good quality and will be thinned to allow the most vigorous trees to continue growing. An aspen stand of about 1 acre is located on the east end of the ridge top and due to its age a recommendation for the creation of a group selection opening to encourage aspen regeneration. These openings and the shelterwood harvest area will be completed in a post-harvest TSI operation.

The marking objective in the non-shelterwood portion of the tract will be the removal of mature/over-mature stems, as well as individuals with lower quality in an effort to improve the overall health, vigor and composition of the stand. The reduction of the present stocking level should provide space for pre-selected crop trees to move forward into the next cutting cycle. This marking objective will lead to a healthier yet more diverse stand in the future. In the shelterwood area the marking objective will be the removal of all undesired species and the coppicing of low vigor oaks. The oak canopy trees that are retained will be the most vigorous with the largest crowns to produce seed for the regeneration of the stand at the next harvest. Based on the species and quality of the timber resource within this tract an estimated cutting cycle of 20 years is advised. A combined tract harvest with tract 12 is planned for the spring of 2010 and an estimated harvest from this tract could approach 200,000 BF.

Wildlife will benefit from this harvest as well. Additional sunlight penetrating the forest floor will simulate the development of new ground flora, subsequently increasing nesting and foraging habitat. This is essential for game and non-game species as well as continued forest development. Post-harvest TSI will increase snags per acre while diversifying diameter distributions of both snags and growing stock trees.

Habitat/cover types currently present within the tract will remain throughout the majority of the tract after the proposed management activities with the possible addition of some early successional wildlife habitat that will develop from group selection openings.

Proposed Activities Listing	**Date Planned**
Archaeological Site review	Spring 2011.
Timber marking & sale	Spring 2011.
Timber harvest	Late Spring 2011.
Post harvest TSI	2011-2012.
Periodic boundary line remarking	2017, 2023, 2029.
Stand Re-inventory & new guide prep.	2030

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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.