RESOURCE MANAGEMENT GUIDE (DRAFT)

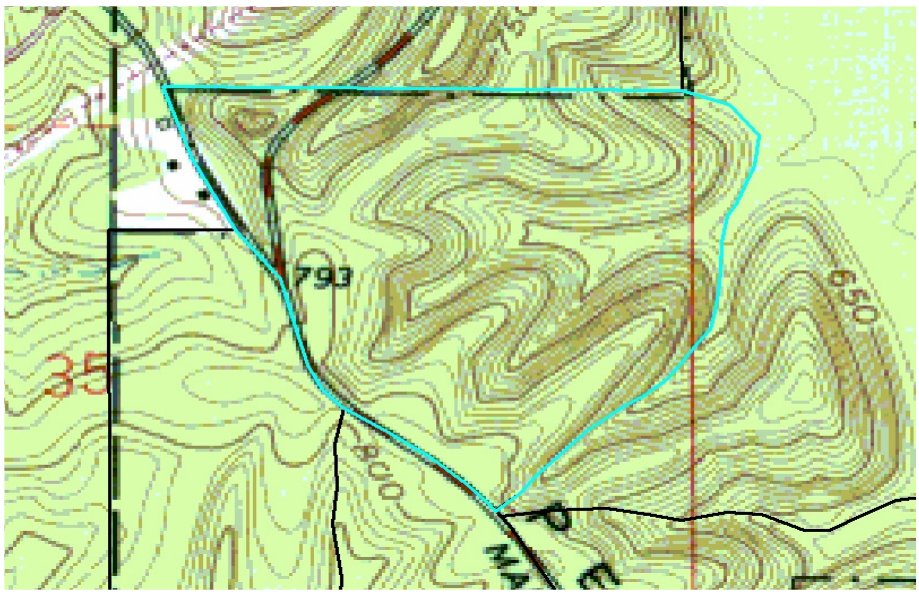
Morgan Monroe State Forest Compartment 07 Tract 06 Property Forester: D. Ramey
Total Acres: 88 Commercial Acres: 80 Date: 01/24/09

Location
Compartment 07, Tract 06 is located in Morgan-Monroe State Forest within Section 35, Township 11N, Range 1W in the southern part of Morgan County. The access to this tract is excellent, located east of the intersection Old State Road 37 and Pine Boulevard/Turkey Track Road .

General Description
MC07T06 is 88 acres of closed-canopy mixed hardwood forest and scattered pines. The dominate timber type is Oak-Hickory. Specific overstory species include BLO, WHO, REO, and YEP. The tract contains an estimated 80 acres of commercial forestland.

History
This parcel was acquired by the State Forest in the 1930's and originally designated as 3 separate smaller tracts of Compartment 17: northwest corner tract 13, northern section tract 12 and southern part tract 10. All 3 subtract inventories were completed by Bill Bull in 1977-78. In April 1979 the southern subtract was sold (183 trees, 56 culls, 52,000 Bd.Ft.) to Crone Lumber Co. for $11,130.00. In February 1980 the Property's Compartments were redrawn and combined creating the present configuration of Compartment 7 Tract 6. In July 1981 the northern part of the present Tract was sold in a combination sale with C7T5 (to the south and east of tract 6) to Foley Hardwoods, Inc. The sale portion of Tract 6 included 350 trees, 139 culls, & 95,074 Bd.Ft. whereas Tract 5 included 80 trees, 18 culls, & 30,880 Bd.Ft. Total sale price was $17,529.52. Plantation records indicate approximately 4 acres of various pine were planted in 1932 by the Civilian Conservation Corps. Records show scotch, corsican and western yellow pines were planted, only white pines were inventoried. The current inventory was completed in June of 2008.

Landscape Context
The land to the east and south this tract is part of Morgan Monroe State Forest. Property to the north and the northwest corner are private landowners, both of which are forested. There is a small residential development ½ mile north of this tract, and some large agricultural fields. The lower western part of the tract is bordered by Old State Road 37 and adjacent to Compartment 11 of the State Forest.



Soils Management Concerns (across from color code)
*Erosion Hazard, Equipment Limitations, Seedling Mortality, Windthrow Hazard

BfG	Berks Channery silt loam 35 - 80% slope Sandstone-bedrock – 30”
SI – 70	Well drained. Most areas wooded. Soil suited to trees.
40 Acres	Limited to building sites due to steepness of slope and depth of bedrock.
Yellow	*Moderate, severe, moderate, slight.
ZaB	Zanesville silt loam 2 - 6% slope Subsoil – 47”
SI – 68	Well drained. Most areas woodlands. Soil suited to trees.
20 Acres	Fragipan restrict root development.
Orange	*Slight, Slight, Slight, Slight.
GpE	Gilpin silt loam 18 – 25% slope Sandstone-bedrock – 36”
SI – 80	Well drained. Most areas woodland. Soil suited to trees.
14 Acres	Not suited for building sites.
Green	*Moderate, Moderate, Moderate, Slight.
ZaC	Zanesville silt loam 6 – 12% slope Sandstone-bedrock – 60”
SI – 68	Well drained. Soil used as woodland. Soil well suited to trees.
8 Acres	Severe limitations to buildings. No basements.
Blue	*Slight, Slight, Slight, Slight.
Be	Beanblossom Nearly level Sandstone & Shale 54”
SI – 90	Moderately well drained. Soil found as woodlands. Well suited for trees.
4 Acres	Severe limitations to buildings and septic systems due to flooding
Purple	*Slight, Moderate, Slight, Slight
Wu	Wilbur silt loam Nearly level Substratum – 60” sand
SI – 100	Well drained. Frequently flooded. Suited to crops and well suited to trees.
2 Acres	Limited to buildings and absorption fields. Frost action limits road usage.
Red	*Slight, Slight, Slight, Slight.

Topography, Geology and Hydrology

The topography includes one main ridge in the north portion and 2 smaller ridges in the south. Each ridge is relatively level on top with steep to moderately steep slopes to the bottomlands. Aspects are primarily southerly facing on the north ridge whereas northwest to southeast aspects occur in the lower two ridges. The slopes range from nearly level to 60%. There is one intermittent stream on the eastern part of the tract boundary and two ephemerals within the tract.

Access

Access to this tract is excellent with 2 road entrances present off of Old State Route 37. Access to the 4 lane Highway 37 is within 1 mile to the west.

Boundary

The land to the east and south this tract is also part of Morgan-Monroe State Forest. Land adjacent to the north property line and northwest corner is privately owned. The western part of the tract is bordered by Old State Road 37. The Tract’s private boundary lines were recently repainted in 2006.

Wildlife

Wildlife habitat documentation and analysis is an important element of tract level forest management. Considering that wildlife species vary greatly in habitat use, the management goal is to maintain the highest level of wildlife habitat diversity. Wildlife habitat features include: snags, live trees, cavity/den roosting trees, culls, downed woody material, ponds, water pools, mast trees, shrubs and fruit producing vines. Standing dead or dying trees (snags), provide bat roosts, cavities and sites for wildlife dens and nests. They also contribute through decomposition as food reservoirs both above ground and on the forest floor. It is recommended that whenever possible all snags are left standing during timber harvest operations, especially on upper slopes and ridge tops. Live tree retention is also important for most forest wildlife species, as they depend on live trees for shelter, escape cover, roosting, mast and foliage. Specific tree densities are essential for tree roosting Indiana bats and cavity nesting/denning wildlife species. Live cavity trees are used by a wide range of wildlife species as they provide long term nests, dens, and create potential future snags. Cull trees are damaged and/or decayed trees that also provide sources of future cavity trees and roosts. Live culls with cavities and decay should be retained for wildlife value. If an adequate number of snag trees are not present, girdling live culls during post harvest timber stand improvement will assist in satisfying guideline requirements. Downed woody material may include tree stems, logs, limbs and tree tops. The advanced stages of decay provide cover and foraging habitat for small mammals, ground-dwelling birds, reptiles, and amphibians. Wildlife ponds are small impoundments designed to permanently hold water throughout the year. These ponds are relatively shallow and often shaded by forest cover. They are also free of fish and provide foraging activity, drinking, cover and most important breeding habitat for forest amphibians. Natural water pools are seasonal and typically occur on poorly drained soils or in places where the water table is close to the ground surface. Mast trees and shrubs and fruit producing vines are hard and soft food resources that are essential for a wide variety of forest wildlife. Wild grape vines are retained except where their growth jeopardizes the integrity of regeneration openings or future stand development. In tract level forest management every effort will be made to meet or exceed target densities of snags, roost trees and cavity trees described to ensure that wildlife habitat benefits the highest number of individuals and populations possible.

Wildlife resources appear to be abundant in this tract. Observations include signs of wild turkey, whitetail deer, small furbearing mammals and a wide diversity of songbirds. The Natural Heritage Database has identified Timber Rattlesnake occurring in adjacent tracts to the east whereas hooded warbler, American badger and homoplectran caddisfly have been documented in nearby tracts to the southwest. Tree species composition in this tract is very diverse ranging from disturbed site species such as sassafras, plantation pines on the ridge tops along the road to bottomland hardwoods near the streams. Shagbark hickory and American elm present on this tract will provide excellent bat habitat. Larger mast trees are present and many will be retained to provide adequate forage for wildlife. The wildlife review has been completed for this tract. This review focuses on wildlife habitat, assisting in creating management activities for the tract. Also inventoried were snags (standing dead trees) as well as representative sizes of living tree species to develop tree counts for the Indiana Bat guidelines. After the IN Bat guideline is developed our management activities are designed to leave as many snag trees and hickory species as possible to retain and improve these specialized habitats.

Wildlife Habitat Feature Tract Summary

	Maintenance Level	Optimal Level	Available Inventory	Available Above Maintenance	Available Above Optimal
Legacy Trees *					
11"+ DBH	792		1974	1182	
20"+ DBH	264		500	236	
Snags (all species)					
5"+ DBH	352	616	1090	738	474
9"+ DBH	264	528	520	256	-8
19"+ DBH	44	88	73	29	-15
Cavity Trees (all species)					
7"+ DBH	352	528	1292	940	764
11"+ DBH	264	352	885	621	533
19"+ DBH	44	88	357	313	269

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

Communities

The Natural Heritage Database Review for this tract reported no any unusual plant or animal communities within the Tract. Nearby tract records include timber rattlesnakes, warblers, American badger and homoplectran caddisfly

Recreation

This tract is very accessible to the public and many visitors utilize this site for recreational opportunities such as: hunting, hiking, nature study, mushroom, berry and nut gathering. Being adjacent to Old State Route 37, the Tract serves as a driveby viewing area for fall forest colors as well as a representative model for sustainable forest management.

Cultural

No known or observable cultural resource areas were encountered during the tract inventory. This tract is protected from wildfire by aerial surveillance during fire seasons and has a well-maintained multi-purpose road on its western boundary. Cultural areas will be documented, recorded and protected when discovered.

Tract Prescription and Proposed Activities
The field inventory was completed in June 2008. The inventory yielded the following silvicultural summary information:

HARVEST / LEAVE REPORT SUMMARY
MBF = 1000 Board Feet

SPECIES	HARVEST MBF	LEAVE MBF	TOTAL MBF
American Beech	0.06	0.0	0.06
American Elm	0.03	0.0	0.03
American Sycamore	0.06	0.0	0.06
Basswood	0.0	0.06	0.06
Black Cherry	0.0	0.12	0.12
Blackgum	0.0	0.03	0.03
Black Locust	0.0	0.02	0.02
Black Oak	.86	1.86	2.71
Chinkapin Oak	0.0	0.04	0.04
Eastern Cottonwood	0.12	0.02	0.14
Eastern White Pine	0.0	0.13	0.13
Largetooth Aspen	0.13	0.0	0.13
Northern Red Oak	0.26	0.68	0.95
Pignut Hickory	0.05	0.21	0.26
Red Maple	0.06	0.0	0.06
Sassafras	0.0	0.13	0.13
Scarlet Oak	0.43	0.37	0.80
Shagbark Hickory	0.0	0.09	0.09
Sugar Maple	0.22	0.12	0.34
White Ash	0.29	0.03	0.32
White Oak	0.32	1.46	1.78
Yellow Poplar	0.15	0.58	0.73
Totals			
PER ACRE	3.04	5.94	8.97
TRACT TOTAL	267.28	522.46	789.74

Total Tract Acreage	88 acres		Present Volume per Acre	8,970 bd. ft.
Basal Area per Acre	105.9 sq. ft.		Harvest Volume per Acre	3,040 bd. ft.
Number Trees per Acre	116		Residual Volume Per Acre	5,940 bd. ft.
Stocking Percentage	87 %		Average Tree Size	13.2” Diameter

Tract Prescription and Proposed Activities

This south part of the tract received a harvest in 1979 (approx. 1,155 BF/acre removed) and the northern part in 1981 (approx. 2,715 BF/acre removed). The inventory completed in 2008 indicates a present volume of 8,970 BF/acre. This tract has been selected as a potential harvest area for the fiscal year of 2009-10. Present volume is mostly BLO(30%), WHO(20%) and REO(10%) and YEP(8%). The overall quality of the sawtimber is good. The inventory indicates that the amount of harvestable volume approaches 3,040 BF/acre with a residual volume of 5,940 BF/acre. The tract is estimated to be at 87% stocking. Given the information provided, this tract is adequately stocked. Species available for harvest consist of black, red, white and scarlet oaks, yellow poplar, American beech, hickories and red maple. The trees are of large sawtimber and there are some potential quality white oak sawtimber. With a stocking level of 87% this tract could be modestly thinned to reduce the stocking level to 70% or higher. An intermediate cutting and at least one regeneration opening is recommended on this tract. Much of the pine plantings have converted to hardwoods, the remaining pine will be reviewed and will either be thinned out, removed to release hardwoods or left for wildlife habitat. The goal is to modify or guide the development of existing crop trees. Over-mature and less desirable species will be removed, releasing the oaks and hickories, allowing the expansion of roots and crown systems. A regeneration opening may be utilized where stands of lower quality species and/or over-mature stands to promote regeneration of oaks and hickories. The harvest will be followed up with a timely close out of skid trails, yards and access roads according to our Best Management Practices. Timber stand improvement to complete the group selection openings, deadening of grapevines and selective girdling of cull trees to promote Indiana Bat populations and cavity dwelling wildlife will be planned postharvest. Ridgetop roads will also be improved to promote a public firewood operation following the sale.

Proposed Activities Listing
Timber marking & sale planned in 2009-10 fiscal year.
Timber Harvest planned in 2010-11.
Timber Stand Improvement to be completed following timber sale closeout.
Public Firewood operation planned following harvest & BMP review.
Re-Inventory work scheduled for 2029.

Attachments:
On file in the property office are the following items

1. A property and topography map of the tract.
2. A map showing the soil types in the tract.
3. A stocking guide chart.
4. Natural Heritage Database Review map.

To submit a comment on this document, click on the following link:
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You **must** indicate "Morgan-Monroe C7 T6" 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.