

# RESOURCE MANAGEMENT GUIDE (DRAFT)

Morgan Monroe State Forest Compartment 12 Tract 09

Property Forester: D. Ramey

Total Acres: 69

Commercial Acres: 69

Date: 02/18/08

## Location

Compartment 12, Tract 09 is located in Section 17, 18, Township 10N, and Range 1E of Monroe County. This tract is in Morgan Monroe State Forest located north of new Farr road and south of old Farr road.

## General Description

MM1209 is 69 acres of closed-canopy mixed hardwood forest and pine stands.

## History

The land was purchased in 1942. This tract was an old abandon, eroded field and had been planted in White Pine, Shortleaf Pine and Red Pine as an erosion control in the 1930's. The tract file has a 1939 aerial photograph showing the abandon field. This tract has also been historically popular for hunting. Property Forester D. Ramey conducted an inventory in September 2007.

## Landscape Context

The land surrounding this tract is dominated by closed canopy hardwood forest being Morgan Monroe State Forest. The southern part of the tract borders a county road. This tract is approx. 1 mile east of Hindustan in Monroe County.

## Topography, Geology and Hydrology

The topography of this tract is relatively flat in the western part and slight slopes in the eastern part. Average gradient is 2-12%. Some sinkholes were noted in the northeast part of the tract. This tract has no major drainages.

## Soils

This tract contains some of the productive soil types for timber production as well as for wildlife populations. This tract is approximately 50% Bedford silt loam and 50% Crider silt loam.

BdB Bedford silt loam 2 – 6% slope Fragipan at depth of 20-30"

SI – 75 Moderately well drained. A few areas in woodland. Soil suited to trees.

35 Acres Moderately limited to buildings because of wetness, shrinking and swelling.

Blue Slight, Slight, Slight, Slight.

CrC Crider silt loam 6 – 12% slope Subsoil – 58" thick

SI – 88 Well drained. Many areas in cultivated crops. Soil well suited to trees.

34 Acres Moderately limited to buildings due to steepness of slope.

Yellow Slight, Slight, Slight, Slight.

## Access

Access to this tract is north of Farr road and south of Old Farr road. The tract is surrounded by State Forest property.

## Boundary

This tract is bounded on the north, west and east by State Forest property tracts; the southern part has approximately .6 mile of county road frontage. There are no private boundary lines or boundary issues.

## **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 are abundant in this tract. The Natural Heritage Database has identified numerous Timber Rattlesnake sightings to the north and northeast of the tract. Trailing Arbutus also noted to the northeast of the tract. Bobcat sighting was identified due east of this tract. Common species also noted include: White tailed deer, wild turkey scratches, various small furbearing mammals and a variety of songbirds.

Tree species composition in this tract is diverse ranging from disturbed site species such as sassafras and black locust to mixed hardwoods and nearly pure pine stands. Larger oak mast trees where present will be retained for wildlife value.

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, and live tree counts to be complete the Indiana bat management guidelines. In order to provide some specialized habitat, we are planning in management to leave as many snag trees and hickory species as possible.

## **Communities**

The Natural Heritage Database Review for this tract did not record any unusual plant or animal communities.

## Recreation

This area is used for seasonal recreational purposes and could also serve as an area for school groups to visit and learn about forest management activities. This tract is very accessible to the public and historically has heavy hunting pressure during hunting seasons. In the spring many people utilize the area hunting mushrooms.

## Cultural

This tract is protected from wildfire by aerial surveillance during fire seasons and has a well-maintained multi-purpose fire road on its western and northern boundary. Being close to private landowners there is a good relationship that supports fire control measures. 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 Prescription and Proposed Activities

The Field inventory was conducted in September 2007. The inventory yielded the following information:

Total Tract Acreage	69 acres	Present Volume per Acre	6,935.9bd.ft.
Basal Area per Acre	156.9sq.ft.	Harvest Volume per Acre	2,885.1bd.ft.
Number Trees per Acre	283.4	Residual Volume Per Acre	4,050.8bd.ft.
Stocking Percentage	135 %	Average Tree Size	10.3”Diameter

### Harvest / Leave Summary

Species	Harvest	Leave	Total
American Sycamore	120.1	23.0	143.1
Black Cherry	386.6	389.4	776.0
Black Locust	48.2	0.0	48.2
Chinkapin Oak	0.0	62.5	62.5
Eastern White Pine	847.0	1,109.6	1,956.6
Black Oak	0.0	50.8	50.8
Black Walnut	0.0	78.7	78.7
Hackberry	0.0	32.4	32.4
Largetooth Aspen	165.5	53.2	218.7
Red Maple	163.6	146.5	310.1
Red Pine	310.2	1,092.9	1,4031.1
Sassafras	37.6	33.7	71.3
Shortleaf Pine	169.1	498.7	667.8
White Ash	105.6	159.1	264.7
Yellow Poplar	531.6	320.3	851.9
TOTAL	2,885.1	4,050.8	6,935.9

This tract has been unharvested since state acquisition. The current inventory is the only management activity recorded with the exception of road improvements done on the east edge of the tract.

This tract is almost 50% hardwoods and 50% conifers. Much of the conifer stands were planted in the 1930's. Species available for harvest consist of eastern white pine, yellow poplar, black cherry, red pine, largetooth aspen, red maple, white ash and sycamore. The trees are of medium to large sawtimber. The stocking level is 135%. The total basal area per acre is 156.9 sq. ft. Both stocking level and basal area is very high, this is due to the amount of pine. From this 86.3 sq. ft. is made up of hardwoods and 70.6 sq. ft. is conifers. It is recommended that the pine be thinned out, to improve the remaining growing stock, and remove the release the hardwoods. An intermediate improvement cutting and several group selection cuts are recommended for this tract. In an average oak hickory stand care should be taken to not reduce the stocking level below 70%, 80-85% stocking is recommended in this tract. The harvest will be followed up with a proper close out according to Best Management Practices. Timber stand improvement to complete in group selection openings. Removal of vines and girdling of cull trees to promote Indiana Bat populations is planned. Main access roads will be improved following the sale.

### **Forest Condition**

This tract has been selected as a potential harvest area for the fiscal year of 2009-10. The primary volume comes from EWP (29%), YEP (18%), BLC (13%) and REP (11%). The overall quality of the sawtimber is good. Inventory results indicate a total volume of 6,935 bd. ft. per acre. The volume harvestable is 2,885.1 bd.ft. per acre and leave volume as 4,050.8 bd. ft. per acre. The tract was estimated to be 135% stocking. Given the information provided, this tract is highly stocked and would benefit from selective harvest.

### **Proposed Activities Listing**

Timber Harvest planned in 2009-10 fiscal year.

Timber Stand Improvement to be completed after timber sale closeout.

Re-Inventory work scheduled for 2027.

### **Attachments (on file in Property office):**

- 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.

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