

Indiana Department of Natural Resources
Division of Forestry

DRAFT
RESOURCE MANAGEMENT GUIDE

State Forest: **Morgan-Monroe**

Compartment: **12**

Tract: **12**

Tract Acreage: **116 acres**

Commercial Forest Acreage: **116 acres**

Forester: **Kaylee DeCosta and Sean Sheldon**

Date: **5/20/2011**

Location

This tract is located about a mile east of Hindustan on Farr Road and about ½ mile south on the iron firetrail gate at the north end of M1215. Most of the tract is located in Section 13 of Township 10N, Range 1W of Monroe County however a small portion of the tract lies also in Section 18, Township 10N, Range 1 E of Monroe County. Public access exists off of Farr Road through the large metal gate for a roadway that proceeds through M1215.

General Description

This tract is 116 total acres of Mixed Oak, Pine, and Bottomland Hardwoods in Morgan-Monroe State Forest, all of which constitute commercial forest acreage. The forest resource is predominantly medium to large sawtimber Bottomland Hardwoods and Mixed Oak with patches of dense White and Virginia Pine stands. Overall timber quality in the tract is fair with the exception of a few small patches of quality oak and YEP growth. This tract is also characterized by areas of poletimber stands and regeneration from several 1984 openings. Some smaller stands along the intermittent creek have a very dense understory with thin to non-existent overstory present and overwhelming grapevine growth. The tract inventory species composition is listed below in Table 1 according to their dominance:

Table 1. Overview of M1212 Forest Resources

Sawtimber	Poletimber	Regeneration
Yellow Poplar	Yellow Poplar	Yellow Poplar
Black Oak	Sugar Maple	Sugar Maple
Northern Red Oak	American Beech	American Beach
Virginia Pine	Black Cherry	Bluebeech
Sugar Maple	White Ash	White Ash
Largetooth Aspen	American Elm	Sassafras
Bitternut Hickory	Black Oak	Flowering Dogwood
White Oak	Red Maple	Red Maple
White Ash	Northern Red Oak	Shagbark Hickory
Eastern White Pine	Blackgum	Black Cherry
Pignut Hickory	American Sycamore	Chinkapin Oak
Black Walnut	Sassafras	Ironwood
Chinkapin Oak	White Oak	American Elm
Black Cherry	Virginia Pine	Pawpaw
American Beech	Black Locust	Blackgum
Sassafras	Eastern Redcedar	Virginia Pine
Red Elm	Red Elm	Largetooth Aspen
Shagbark Hickory	Largetooth Aspen	Hackberry
Black Locust	Pignut Hickory	Black Locust
American Sycamore		Bitternut Hickory
Blackgum		Pignut Hickory

Red Maple American Elm	Red Elm Redbud
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History

The land on this tract was granted to Morgan-Monroe State Forest 7/20/1945 by Mary and Newton Cummings. Boundary work on this tract was first completed in February and March of 1989. This work included a boundary line survey with subsequent painting and posting of State Forest property lines. On May 2, 1975 a timber sale of 57,968 BF of timber was sold to Crone Lumber Company for \$2,500.00. On February 29, 1984 a timber sale of 377,744BF was sold to Kinser Hardwoods for \$60,576.00. Prior to that timber sale, an inventory of tract 12 which then included a portion of tract 14 was completed on 5/24/1983 for which data are unavailable. TSI was completed in the regeneration openings by property staff. The current tract inventory was completed on May 20, 2011 by Forest Intermittent Kaylee Decosta.

Landscape Context

This tract is surrounded by a unique matrix of habitat and timber types. This tract is located on the south edge of the main block of Morgan-Monroe State Forest. It is bordered by private forestland and field areas at the southeast corner and to the west. A modest sized private lake and campground managed by the Wheeler Mission in Indianapolis borders a portion of the SE boundary. Several field and grazing areas also exist within the 1 mile landscape vicinity. The private forestland to the west underwent a recent (< 3 years) timber harvest and contains some significant areas of forest regeneration.

Topography, Geology and Hydrology

Topography ranges from nearly level to 75% slopes although the majority of this tract's topography is gently sloping. South and East aspects dominate within the tract. The soils are predominately silt loams and soil depths range from 15 - 60 inches to silt loam and sandstone and/or shale bedrock. One mapped intermittent creek runs centrally through this tract and another forms the east tract boundary. Several other unmapped ephemeral drainages also occur throughout the tract. Water resources from this tract drain into Lazy Lake or Lazy Creek and from there into Beanblossom Creek which feeds Lake Lemon.

Soils

St (Stendal silt loam) Nearly level, deep, somewhat poorly drained soils on broad flats and narrow stream channels. Areas are subject to flooding and soil tends to be somewhat acidic. Site index is 90 for Yellow Poplar and Virginia Pine. This soil type presents slight risks for erosion, seedling mortality, and windthrow hazard. Equipment limitations may exist January through May due to wetness. Approximately 15% of this tract is comprised of this soil type in the central part of the tract along the intermittent drainage.

EkB (Elkinsville, silt loam, 2 – 6% slopes) Gently sloping, deep, well drained soil on broad terraces adjacent to drainages and bottomland sites. Site index for Yellow Poplar is 98 and 90 for White Oak. This soil type presents slight risks for erosion, seedling mortality, equipment limitations and windthrow hazard. Approximately 10% of this tract is comprised of this soil type along the tops of the gently sloping ridge adjacent to the roadway. The Elkinsville soils historically have been among the best growing sites for Indiana hardwoods on Morgan-Monroe State Forest.

EkF (Elkinsville silt loam, upland, 20 – 40% slopes) Moderately steep to very steep, deep, well drained soil on terraces in steep areas adjacent to bottomlands. This soil type presents moderate erosion and equipment limitations and slight seedlings mortality and windthrow hazard. Approximately 40% of this tract is comprised of this soil type in areas between slopes and flat creek bottomlands. The Elkinsville soils historically have been among the best growing sites for Indiana hardwoods on Morgan-Monroe State Forest.

BkF (Berks-Weikert complex, 25-75% slopes) Steep to very steep slopes and moderately deep and shallow well drained soils on side slopes. This tract is comprised of approximately 35% of this soil type and presents moderate erosion hazard, severe equipment limitations, moderate to severe seedling mortality, and slight to moderate windthrow damage. Surface runoff of this soil is rapid. Haul roads should be constructed on contours to prevent erosion.

Access

There are two possible access routes into this tract. The best and public access is off of Farr Road through the large metal gate on the north boundary of M1215. This roadway proceeds through M1215 and enters the north end of the tract. The south access is a private roadway that is not available for public use but is potentially available for use by State Forest contractors. This roadway proceeds north from Anderson Road via the Wheeler Mission Lake roadway and proceeds along State Forest property and then onto Lazy Lake which is owned and managed by the Wheeler Mission. This access road accesses the south end of M1215 and proceeds northerly into the current tract. Recent improvements along this roadway were observed by the Staff in May of 2011. One log yard and haul road currently exist for harvesting within this tract and utilizes the roadway and gate that proceeds north to Farr Road. This roadway needs modest rehabilitation prior to use. The south access right of way warrants review by the Forest staff in the event of a combined harvest with adjacent tract M1214. A letter of agreement for Ingress and Egress with Camp Hunt of Wheeler Mission Ministries along this roadway was obtained in December 2001 for Division of Forestry access.

Boundary

This tract is bordered by the Morgan-Monroe State Forest to the north, northeast and south. Private forestland and grazing fields are adjacent to the northwest, west and southern portions of the tract. The Wheeler Mission also owns property to the southeast of the tract. The west lines were surveyed by Kevin Potter for the adjacent landowner (Ferguson) in 1987 and were subsequently reviewed by DNR surveyor Bob Vollmer and Forest Specialist D. Vadas in 1988-1989. All boundaries were then marked in orange paint with corner metal posts and monuments. Currently the paint is somewhat faded and will be updated according to the property's boundary remarking plan or prior to any scheduled timber or wildlife management activities.

Wildlife

A Natural Heritage Database review was obtained for this tract. If rare, threatened or endangered species were identified for this area, the activities prescribed in this guide will be conducted in a manner that will not threaten the viability of those species. Worm-eating, Cerulean, Hooded, and Black-and-White Warblers were detected within the tract during the inventory. A timber harvest would encourage the growth of a denser understory and shrub layer component which is already present within the tract. This habitat type provides cover and nesting habitat for Worm-eating, Hooded, and Black-and-White Warblers. According to the Indiana State Forest Environmental Assessment handbook, research in Indiana has shown

that Cerulean Warblers do not show avoidance for harvested areas and also that canopy gaps may be an important component of Cerulean habitat. These birds would most likely be benefitted by a light timber harvest in this tract. The current inventory was conducted during the spring of 2011; most breeding bird residents were present. The following bird species were detected during the inventory:

Acadian Flycatcher	Eastern Wood-peewee	Ruby-throated Hummingbird
American Crow	Great-crested Flycatcher	Scarlet Tanager
American Woodcock	Hairy Woodpecker	Swainson's Thrush
<i>Black-and-White Warbler (SC)</i>	<i>Hooded Warbler (SC)</i>	Tennessee Warbler
Black-pole Warbler	House Wren	Tufted Titmouse
Blue Jay	Indigo Bunting	White-breasted Nuthatch
Blue-gray Gnatcatcher	Kentucky Warbler	White-eyed Vireo
Blue-winged Warbler	Louisiana Waterthrush	Wild Turkey
Brown-headed Cowbird	Northern Cardinal	Wood Thrush
Carolina Wren	Northern Parula	<i>Worm-eating Warbler (SC)</i>
<i>Cerulean Warbler (SE)</i>	Ovenbird	Yellow-billed Cuckoo
Chimney Swift	Pileated Woodpecker	Yellow-breasted Chat
Common Yellowthroat	Red-bellied Woodpecker	Yellow-throated Vireo
Downy Woodpecker	Red-eyed Vireo	Yellow-throated Warbler
Eastern Towhee	Rose-breasted Grosbeak	Barred Owl

Other species most likely utilizing this tract include White-tailed Deer, Grey and Fox Squirrels, Eastern Chipmunk, Raccoon, Opossum, Coyote and other small mammals. Deficiencies were found in the Wildlife Habitat Feature Summary for larger diameter legacy trees. Other deficiencies were for larger diameter snags below maintenance levels as well as in the “Above Optimal” category as highlighted in red below. An increase in snag density is expected to occur in the next few years due to expected natural mortality from the sustained drought that occurred throughout the State Forest in the Summer/Fall of 2010. A post-harvest TSI plan for this tract will also address the girdling and deadening of some larger diameter cull trees to create additional snags. A large portion of this tract (~33 acres) was regenerated in 1984. These stands now consist of mainly pole to small sawtimber sized and this acreage in poletimber has contributed to the larger diameter deficiencies for legacy trees. Although maintenance levels will likely be reached in several years as these trees grow towards maturity, timber management activities will be targeted to retain these tree species and encourage their healthy, vigorous growth.

	Maintenance Level	Optimal Level	Inventory	Above Maintenance	Above Optimal
Legacy Trees *					
<i>11"+ DBH</i>	1044		1858	814	
<i>20"+ DBH</i>	348		111	-237	
Snags (all species)					
<i>5"+ DBH</i>	464	812	781	317	-31
<i>9"+ DBH</i>	348	696	439	91	-257
<i>19"+ DBH</i>	58	116	25	-33	-91

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

Communities

A Natural Heritage Database review was obtained for this tract. If rare, threatened or endangered species were identified for this area, the activities prescribed in this guide will be conducted in a manner that will not threaten the viability of those species.

Multiflora Rose was noted extensively throughout the tract and in some areas was noted as especially dense and spreading. *Bush and Japanese Honeysuckles* were also noted in a few areas. These should be treated where feasible during this management cycle to control and prevent further spread. *Black Locust* was also observed in all layers of this tract. This species is considered invasive also and sawtimber trees should be marked to remove these from the overstory as well as the postharvest treatment should include treatments.

Recreation

Recreational opportunities for this tract include hiking, hunting, mushrooming, and wildlife/nature viewing. ATV traffic was noted along the private roads surrounding this tract.

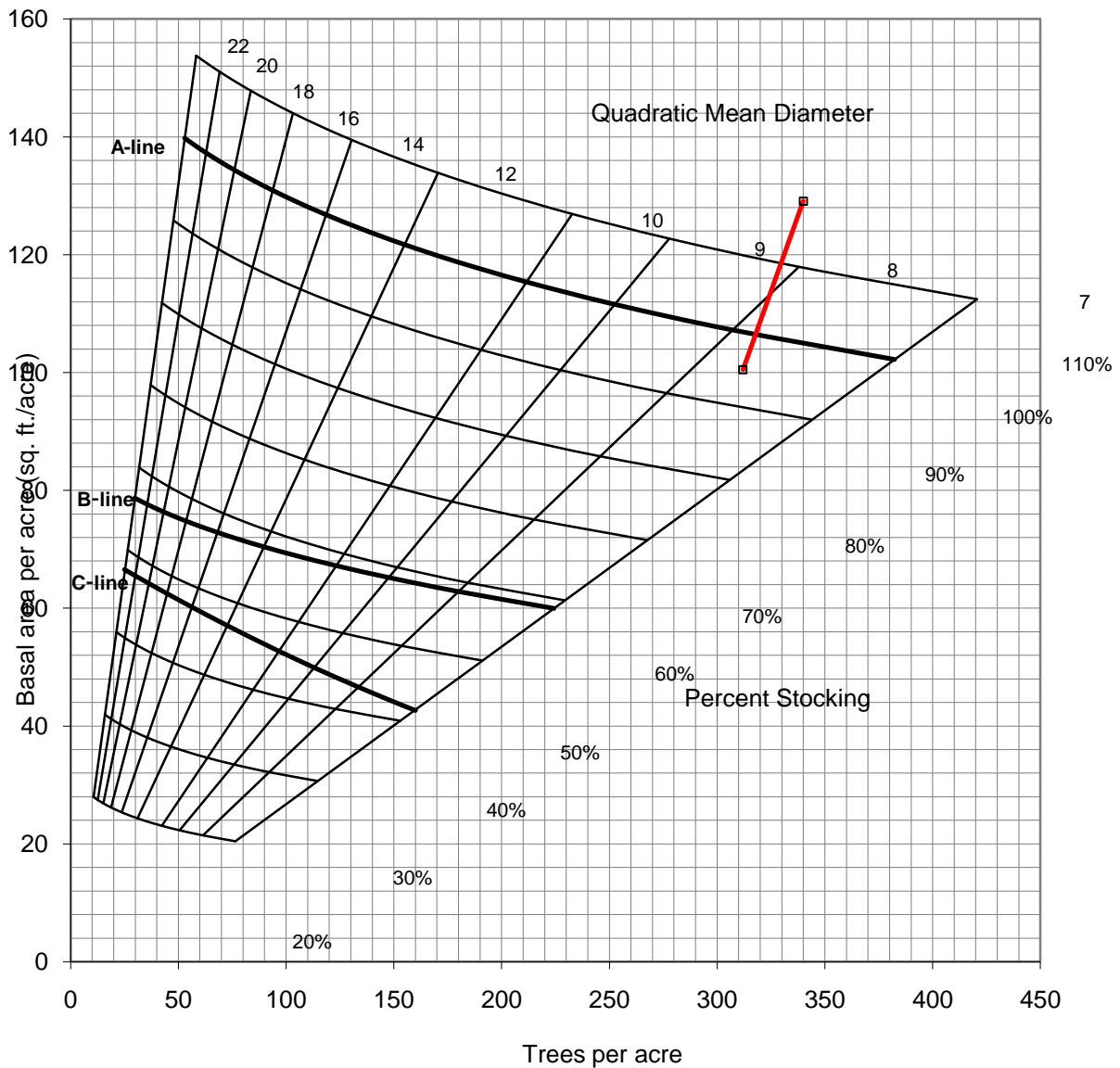
Cultural

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

Tract Subdivision Description and Silvicultural Prescription

Tract Summary Data – May 2011 Inventory

Total Trees/Ac.= 340	Overall % Stocking = 120% (Over-stocked)
Sawtimber & Quality Trees/Ac.= 52	BA/A= 129.1 sq.ft./Ac.
Present Volume	= 7,616 Bd. Ft./Ac.
Harvest Volume	= 2,186 Bd. Ft./Ac.
Growing Stock Volume	= 5,429 Bd. Ft./Ac.



Silvicultural Prescription

This inventory was completed on May 20, 2011 by Forest Intermittent K. DeCosta. 35 prism points were completed over 116 acres (1 point for every 3.3 acres). Inventory summary results are presented above. This tract is overstocked and a timber harvest is recommended. A combined tract harvest with adjacent Tract 14 is recommended for Fiscal Year 2011-2012. This tract is dominated mainly by cove and bottomland hardwoods with some scattered oak stands. Yellow Poplar was the most commonly encountered tree species within the tract. Overall quality throughout the tract is only fair, although pockets of quality growth exist. A timber harvest is proposed to improve and thin the current stand to release and promote the growth of high quality croptrees. Trees that are mature, poorly formed, suppressed or have excessive crown damage or have overall low vigor should be removed in an improvement cutting. Selecting these trees for removal will release from above and below quality croptrees and increase their growing space. Group selection openings may be warranted in several locations that have predominantly poor species composition, windthrow damage, or low residual basal area. Several inventory points were noted as having low stocking and poor quality and species composition; these areas may

warrant regeneration. The Virginia Pine stand within the tract appears to be in modest decline and it is recommended that this area be regenerated to hardwoods. The White pine stand is healthy although some thinning is needed; trees that are mature or have suppressed crowns should be removed to allow for the continued healthy growth of this stand. Pine stands are a valuable refuge for wildlife in winter seasons with deep snow and also offer increased habitat diversity. White Ash should be removed where feasible in a sanitation cutting to reduce habitat for enlarging Emerald Ash Borer populations that are already present in Monroe and northern Brown County.

The proposed timber harvest could be sold in conjunction with Tract 14 to the south. This combined harvest would utilize the existing haul road that runs along the north east boundary of tract 12 and enters tract 14 from the north with some of Tract 14's harvest utilizing the Wheeler Mission/Lazy Lake access road on the south end. Combining the two tract harvests would reduce the reentry period needed for resource management of both areas. Timber stand improvement is recommended for the ~33 acres of regeneration openings created in 1984. TSI should be performed to cut and deaden grapevines where they pose a threat to future crop trees. TSI is also recommended to fell or deaden some competing species and give release as well as increase growing space for croptrees of desirable species and quality. Several invasive species were noted in this tract during the inventory with Multiflora Rose being the most prevalent species. This species should be treated in areas where its growth is thickest in an effort to limit further spread although tractwide treatment of this species is not practical. Multiflora Rose is prevalent through much of the forest stands in Monroe, Morgan & Brown Counties and does not appear to be spreading or to pose a threat to native species although monitoring of its population is recommended. Japanese Honeysuckle was also found as well as one notable Bush Honeysuckle infestation. This area was mapped and pre-harvest treatment is recommended. Black locust is currently an invasive species and should be marked for harvest. TSI to reduce the prevalence of this species should be planned in the post harvest TSI project. Based on the timber inventory a modest timber harvest of up to 250,000 BF is possible in a harvest that utilizes mostly improvement cuttings along with some group selection cuts however with the hard drought that was experienced in the area in the fall of 2010 harvest levels could increase the amount of group selections by the time marking commences. As Elkinsville soils historically have been among the best growing sites for Indiana hardwoods on Morgan-Monroe State Forest and the tract inventory indicates only fair to poor stocking of quality timber, additional regeneration areas within this tract should be evaluated during its marking. Large areas of regeneration may also benefit this area historically rich in early successional wildlife such as Ruffed Grouse. Therefore a modest increase in the harvest volume per acre may be expected after marking commences.

Volume Estimates: Yellowwood SF Comp. 12 Tract 12

(May 2011 Inventory Data)

Species	Harvest	Leave	Total
Yellow Poplar	77,820	247,110	324,930
Black Oak	73,980	131,590	205,570
Largetooth Aspen	21,150	24,380	45,530
White Ash	17,570	0	17,570
Virginia Pine	15,600	11,150	26,750
Northern Red Oak	13,530	32,570	46,100
White Oak	9,770	20,120	29,890
Sugar Maple	8,390	22,520	30,910
Eastern White Pine	7,260	42,490	49,750
American Beech	3,320	11,890	15,210
Red Elm	2,610	2,230	4,840
Black Locust	1,350	0	1,350
Chinkapin Oak	1,270	2,740	4,010
American Elm	0	1,380	1,380
American Sycamore	0	7,440	7,440
Bitternut Hickory	0	16,630	16,630
Black Cherry	0	12,630	12,630
Blackgum	0	1,980	1,980
Black Walnut	0	9,170	9,170
Pignut Hickory	0	13,230	13,230
Red Maple	0	5,360	5,360
Sassafras	0	8,250	8,250
Shagbark Hickory	0	4,920	4,920
Tract Totals (Bd. Ft.)	253,620	629,780	883,400
Per Acre Totals (Bd. Ft./Ac.)	2,186	5,429	7,616

Proposed Activities Listing

Proposed Management Activity

Boundary Line remarking
DHPA Sale Project Review w/T14
Road construction Rehab & Yard construction w/T14
Preharvest Invasive Treatment
Timber Marking
Timber Sale
Postharvest TSI Project & invasive control
Boundary Line Remarking – per 6 Yr plan
ReInventory and Management Guide

Proposed Date

FY 2011-2012
FY 2011-2012
FY 2011-2012
FY 2011-2012
FY 2011-2012
FY 2011-2012
CY 2012-2014
2017, 2023, 2029
2031

Attachments

Included in Tract File:

- Topo Map of Tract Features
- Tract Soils Map
- INHD Review Map
- Stocking Guide Chart
- Ecological Resource Review
- TCruise Reports

To submit a comment on this document, click on the following link:

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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.

Note: Some graphics may distort due to compression.