Indiana Department of Natural Resources – Division of Forestry

DRAFT

RESOURCE MANAGEMENT GUIDE

STATE FOREST: Harrison Crawford **COMPARTMENT**: 22 **TRACT**: 06

Date: September 18, 2012 **Forester: Wayne Werne**
(Inventory – July, 2012)

INVENTORY SUMMARY

NUMBER OF STRATA: **3** **Est. growth: 143 bd. ft/ac/yr****
PERMANENT OPENINGS: **0.5 ac** **Est. management cycle: 13-17 yrs**
TOTAL ACREAGE: **74 ac**
AVERAGE SITE INDEX: **70-80** - for upland oaks, **95-100** – for yellow-poplar
AVERAGE BASAL AREA: **120 sq. ft/ac**

****Growth** was calculated by using 2012 volume **MINUS cedar**, subtracting the volume of 4128 bd. ft/ac from the 1989 inventory and dividing by 23 years of growth. Cedar volume was figured using a different cedar log scale (much more volume from small trees), which was not used in 1989.

TRACT 2206 TOTAL VOLUME (bd ft)

	CUT		LEAVE		TOTAL	
SPECIES	per acre	total	per acre	total	per acre	total
American beech	42	3,121		-	42	3,121
Blackgum	25	1,858		-	25	1,858
Black oak	483	35,887	496	36,853	979	72,740
Chinkapin oak	42	3,121	77	5,721	119	8,842
*Eastern redcedar**	*218*	16,197		-	*218*	*16,197*
Northern red oak	335	24,891	727	54,016	1,062	78,907
Pignut hickory	309	22,959	206	15,306	515	38,265
Red maple	14	1,040		-	14	1,040
Shagbark hickory		-	184	13,671	184	13,671
Sycamore	36	2,675		-	36	2,675
Sugar maple	303	22,513	297	22,067	600	44,580
White ash	690	51,267	119	8,842	809	60,109
White oak	724	53,793	2,083	154,767	2,807	208,560
Yellow-poplar	232	17,238		-	232	17,238
TTOTAL	3,453	256,558	4,189	311,243	7,642	567,801

**Cedar volume was calculated using a special cedar scale that counts volume in trees 6" DBH and larger, which results in high volumes for areas of small trees.*

STRATUM 1 – Oak hickory **ACREAGE: 51.4**

	CUT	LEAVE	TOTAL	SNAG
VOLUME/ACRE:	3,000	4,671	7,671	
TOTAL VOLUME:	154,200	240,090	394,290	
BASAL AREA/ACRE:	61.9	61.6	123.5	
# TREES/ACRE:	98	152	250	

STRATUM 2 – Mixed mesophytic **ACREAGE: 17.0**

	CUT	LEAVE	TOTAL	SNAG
VOLUME/ACRE:	4,609	3,637	8,246	
TOTAL VOLUME:	78,353	61,829	140,182	
BASAL AREA/ACRE:	46.8	67.2	114.0	
# TREES/ACRE:	93	200	293	

STRATUM 3 – Old field - advanced **ACREAGE: 5.4**

	CUT	LEAVE	TOTAL	SNAG
VOLUME/ACRE:	3,802	1,124	4,926	
TOTAL VOLUME:	20,531	6,070	26,600	
BASAL AREA/ACRE:	96.2	15.0	111.2	
# TREES/ACRE:	328	19	347	

Open field (encroachment by neighbor) **ACREAGE: 0.5**

Note: Please reference the appendix for tables and graphs of various stratum statistics

TRACT BOUNDARIES: This tract is totally surrounded by private property. The original deed calls for splitting of a larger portion of land equally in half to equate to 74 acres. This results in the east boundary being somewhat unknown and not an equal portion of a section or quarter section. Currently (and for some time) there seems to be an encroachment of a fenced pasture into this tract on that eastern boundary, which appears to be the result of a field in the original landholding to be bridging the line that split it into the portion the state acquired and what was left. It seems that whoever has farmed this area since the transfer has continued to use the original field even though part of it is on the state forest ownership.

All previous notes in the file mentioned that boundary lines were very unclear and not marked on this tract. During the course of the inventory, though, the neighboring landowner pointed out the northwest corner where a small piece of state ground is north of the road. While there, a sandstone rock that had been driven over and knocked down was found in the vicinity of where the corner should be and will be assumed to be the

cornerstone. At the southwest corner, an upright stone was found close to a surveyor witness sign in a nearby tree, so it is assumed this is the cornerstone denoting that corner of the property.

On the south side in the eastern half, an old fence was present that ran in an east west direction to an intersection of a better fence that ran north from what is assumed to be the southeast corner. This fence seems to follow the north south line until it gets near the vicinity of the pasture encroachment, as which point it zigzags around the pasture and does not continue north from there. North of this, there is some old fence that does not seem to exactly follow the line, but generally goes north along the line toward the northeast corner which was found and assumed to be a very old pipe with a newer metal T post next to it.

Though none of these corners presented clear evidence of being the actual corners of the property, they were all in the correct vicinity and seemed to be the logical corners, as they appeared correctly on the map when GPS coordinates were overlaid with the map. Any future management will work off of lines established from these markers.

ACCESS: This tract touches Old Forest Road on the northwest portion, cutting through the northwest tip, and also touches it near the southwest portion, which would be the access point for any management work.

ACQUISITION HISTORY: The land that makes up this tract was acquired from Julia Steier in 1943 for an unknown sum.

TRACT DESCRIPTION: This tract was divided into three strata based on cover type and past management. These strata include: oak hickory, mixed mesophytic, and old field - advanced. These will be described in detail below.

Stratum 1 - Oak hickory

This 51-acre stratum was the primary cover type on this tract and occupied the upper slopes throughout the tract as it intermingled with the mixed mesophytic stratum in the drainages.

It contained a moderate volume of 7671 bd. ft/ac, and was composed primarily of white oak (3727 bd. ft/ac), which accounted for half the volume present. Black oak (978 bd. ft/ac), northern red oak (948 bd. ft/ac), and pignut hickory (703 bd. ft/ac) accounted for an additional 35%. The remaining 15% of the volume consists of white ash, sugar maple, shagbark hickory, and various other species.

Stratum 2 – Mixed mesophytic

This 17-acre stratum occupied most of the rest of this tract with some transitioning into oak hickory at several places. It primarily occupied the lower slopes along the central east west drainage as well as the lower slope along the southeastern half of the tract.

The high total volume (8246 bd. ft/ac) is composed primarily of white ash (1990 bd. ft/ac), sugar maple (1617 bd. ft/ac), and northern red oak (1502 bd. ft/ac). The remaining 40% of the volume consists of white oak, black oak, yellow-poplar, and various other species.

Stratum 3 - Old field - advanced

This 5-acre stratum is found primarily on the lower eastern slope where former agricultural fields once occupied the area, as well as some area in the middle of the tract that was also farmed in the past. This stratum was primarily identified by pockets of cedar interspersed with early successional hardwoods.

The total volume (4926 bd. ft/acre) is composed primarily of eastern redcedar (2023 bd. ft/acre), black oak (1124 bd. ft/acre), and yellow-poplar (1002 bd. ft/acre). The remaining 15% of the volume consists of northern red oak and red maple. It should be noted that the high volume of cedar is due to using a cedar log scale that results in a higher than Doyle volume, and includes trees down to 6" DBH as sawtimber volume.

Open field (0.5 acres)

There is currently about a half acre of open pasture/hay ground that the neighbor to the east is continuing to farm, which appears from all evidence to be a long running encroachment onto the state. It is currently maintained as permanently open, but this issue will have to be dealt with before any management is undertaken.

SOILS: The following soils are found on the tract in approximate order of importance.

CoF Corydon stony silt loam, 20-60% slopes Upland oak SI is 65-75, Yellow-poplar SI is 80-90, est. growth is 155-220 bd. ft/ac/yr. for oaks and 260-335 bd. ft/ac/yr. for yellow-poplar.

GlE2 Gilpin silt loam, 18-25% slopes, eroded Upland oak SI is 70-80, Yellow-poplar SI is 90-100, est. growth is 185-260 bd. ft/ac/yr. for oaks and 335-415 bd. ft/ac/yr. for yellow-poplar.

HgD3 Hagerstown silty clay loam, 12-18% slopes, severely eroded Upland oak SI is 85-95, Yellow-poplar SI is 90-105, est. growth is 300-375 bd. ft/ac/yr. for oaks and 335-450 bd./ ft/ac/yr. for yellow-poplar.

TlB2Tilsit silt loam, 2-6% slopes, eroded Upland oak SI is 70-80, Yellow-poplar SI is 85-95, est. growth is 185-260 bd. ft/ac/yr. for oaks and 300-375 bd./ ft/ac/yr. for yellow-poplar.

BpD3 Baxter cherty silty clay loam, 12-18% slopes, severely eroded Upland oak SI is 70-80, Yellow-poplar SI is 90-100, est. growth is 185-260 bd. ft/ac/yr. for oaks and 335-415 bd./ ft/ac/yr. for yellow-poplar.

RECREATION: This tract is an isolated outholding that is at least a quarter mile from other larger state forest land. As such, it is surrounded by private property and probably receives limited hunting or other recreational pressure. The neighbor owning adjacent to the access point has stated before that he has confronted people who park on or near his property to access this area, and so this probably also limits use. There are no recreational trails in this tract, but there are a few caves nearby and probably it has been walked through by people looking for new caves.

WILDLIFE: This tract represents typical upland forest habitat, in addition to a small component of old field with cedar and smaller hardwoods. Consequently, it likely receives use from a typical assemblage of common game and nongame wildlife species such as white-tailed deer, wild turkey, squirrels, songbirds, snakes, box turtles, and others. Hard mast food sources are provided by the oak hickory type, but another habitat component would come from the scattered cedar trees. These areas provide cover and bedding areas, especially during the winter months.

Snags were tallied in this inventory for potential uses by wildlife. The following tables summarize guidelines and actual data with regard to the new strategy for consideration of

the Indiana bat. The categories of optimal and maintenance guideline numbers were broken down by size class subcategory, but are inclusive of size classes above that. In other words, the maintenance guideline for number of snags in the 6" class and larger was 4 per acre, but of that number 0.5 per acre should be 20"+ and 3 should be 10'-18" or greater. This was done because larger trees are more valuable and less common, and were given the greater importance when calculating total guideline numbers.

Guidelines for preferred density of live and dead trees for use by Indiana bat:

# of live trees per acre	Guidelines maintenance	Tract 2206 actual present – harvest = residual
12"-18" DBH class	**6**	**35.2 – 12.2 = 23.0**
20" DBH and greater	**3**	**17.6 - 9.0 = 8.6**
Total	**9**	**52.8 - 21.2 = 31.6**

# snags per acre	Guidelines maintenance	Guidelines optimal	Tract 2206 actual
6" - 8" DBH class	**1**	**1**	**14.3**
10"-18" DBH class	**2.5**	**5**	**8.7**
20" DBH and greater	**0.5**	**1**	**0.7**
Total	**4**	**7**	**23.7**

These numbers show that both live tree densities as well as snag densities meet guidelines on this tract. The result for large snags is consistent with several other recently completed inventories on other tracts of the forest, where large snag densities are below one per acre, though the density here is definitely higher than on other tracts where densities seem to hover at about 0.3 per acre. The vast majority of snags are in the smaller size classes, which makes them unsuitable for most nesting or roosting purposes, but some feeding use might be gained from them.

Management activities will not intentionally remove snags, with a few exceptions of large recently dead trees or storm damage when possible, so the timber sale will not negatively impact that component significantly. Creation of more snags in this size class could be undertaken by girdling large cull trees in a post-harvest TSI operation.

Additionally, management activities involving a timber sale should not affect this habitat long-term from the perspective of any wildlife utilizing it due to the maintenance of a forested habitat on the tract. Creation of openings will create early successional forest habitat that will be beneficial to certain groups of wildlife dependent upon this habitat. Likely, early successional habitat created with such management will also benefit a wider segment of wildlife species that preferentially utilize such habitat for feeding and cover more so than later successional stage habitat.

Since this tract does not border a major stream, there should be no disruption of any potential travel corridors by forest management activities. The habitat on this tract in the context of the surrounding landscape does not represent any special component that would be used more preferentially or exclusively by wildlife for traveling or dispersion, as riparian habitat might be, or as forest in a non-forested landscape might be.

This tract borders other forested areas, but also exists in a landscape interspersed with open farmland. In the context of the surrounding landscape, this tract represents a small chunk of forest in a matrix of surrounding forest-ag land mix. It is also not that distant from Indian Creek – a moderate sized stream/river, so it may provide an ideal mix of forest habitat close to a riparian area adjacent to open ground that might be used for foraging/hunting by various wildlife species.

WATERSHED / HYDROLOGY: The majority of the tract contains gentle to moderately steep slopes that drain into an intermittent drainage that then drains into Indian Creek about a mile and a half mile to the south, which eventually drains into the Ohio River. This area lies within a karst landscape with underground drainage, and there are several sinkholes scattered within the tract. Additionally, there was a small waterfall formation in the central portion of the tract. Several caves lie to the south on private land.

HISTORICAL AND 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.

RARE, THREATENED, OR ENDANGERED SPECIES: 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.

EXOTICS: There were at least 3 distinct pockets of ailanthus found throughout this tract during inventory. There are very likely more occurrences of this species throughout the tract. Ailanthus seems to pop up wherever there is any kind of opening – even with one windthrown tree – and its prolific seed production usually ensures that there will be seedlings or saplings present in these openings wherever they happen to be.

There may be some Japanese stilt grass growing in the disturbed areas and along the drainages within this tract, as it always seems to show its presence in the forest in these areas.

SILVICULTURAL HISTORY AND PRESCRIPTION:

General: Utilizing records of the past history of this tract, an inventory done in 1989 indicated a total standing volume of 4128 board feet per acre. The 2012 inventory shows 7424 board feet per acre (not including cedar), and this figures out to a growth rate of 143 board feet per acre per year, after taking into account the 23 years of growth since then. Cedar volume was figured using a different cedar log scale (much more volume from small trees), which was not used in 1989, and this is why cedar volume is being excluded from growth calculations, as it was probably given marginal volume in 1989.

The growth figures are somewhat low, but probably what would be expected on this seemingly poor site with shallow soil – especially the south facing slope in the north end. There should be the potential to increase this growth rate if more frequent management is applied to the tract, since it may be suffering from slowed or stagnated growth with no record in the files of any harvesting or management activity during state ownership. It is hoped and assumed that this growth rate can be increased into the future with the continued management and encouragement of vigorous and healthy crop trees and the possible conversion of cedar areas to hardwoods.

Number of trees per acre and basal area per acre figures indicate that all strata are overstocked at between 100% to 110%. Removal of trees tallied as "cut" either via a timber sale or TSI would reduce the stocking levels to around 60% stocking in the oak hickory and mixed mesophytic strata – close to the B line. The old field area would drop from overstocked to off the chart in the understocked direction due to the removal of all cedar and the majority of the drought damaged poplar currently present there. This would be more of a regeneration harvest in that area. The drastic reduction of stocking would be generally confined to limited areas of regeneration openings and small conversion areas, while overall the tract as a whole should remain generally fully stocked and maintain the majority of its canopy cover. The old field area slated for conversion is less than 7% of the acreage of this tract. Some adjustment to the marking strategy can be adopted to reserve more basal area in areas of better timber to compensate for the reduction in areas of cedar or regeneration openings, thereby keeping the stocking level above 60%.

Due to the amount of volume being carried on the majority of the tract (7424 bd. ft/ac – not including cedar), the length of time since the last managed sale (at least 40 years or more), and the general size and condition of the overstory trees in the majority of the tract, the initial impression was that an improvement harvest could be undertaken in this tract at any time. This would produce a sale volume of approximately 240,000 board feet (not including cedar) or about 3235 board feet per acre and leave approximately 310,000 board feet (plus 16,000 bd. ft of cedar), or 4189 board feet per acre (4425 bd. ft/ac with cedar).

It is recommended that Timber Stand Improvement (TSI) be undertaken in this tract after the harvest to accomplish a variety of tasks, including completion of any marked

openings. TSI of pole-size trees may be required for thinning in places, and to open up the understory for potential oak regeneration to take hold or be released in the less mesic sites. Vines did not seem to be a big problem in this tract, but need to be kept at bay with TSI activities as well. Extensive understory treatment of shade tolerant species will be necessary to encourage oak regeneration where present. Ailanthus needs to be monitored and eliminated when found to be present or establishing itself. There were several small areas of ailanthus noted at the time of inventory, and there are probably several more pockets scattered throughout the tract. Ideally, all the ailanthus should be treated pre-harvest, and then follow-up should be done to treat any new seedlings and sprouts that come up in newly opened up parts of the tract. Long term monitoring will be necessary to keep this exotic at bay.

Stratum 1: Oak hickory

This 51-acre stratum contains a moderate volume of 7671 board feet per acre of which 3000 was classified as harvestable and 4671 was classified as residual. This would remove 62 square feet of basal area, which would leave the residual stocking with 62 sq. ft. These figures DO include cedar as figured according to the cedar log scale. Stocking would drop from 110% to about 58% with the indicated management (at the B-line). Additional reserve trees can be left in the mixed mesophytic type to make up for the reduction of basal area in this area.

Since there is no record of a harvest in this tract for at least 40 years, and because it currently contains a moderate volume of both harvestable material and residual growing stock, the recommendation would be to rank this stratum as a medium to high priority for conducting a harvest. Any timber sale would primarily include this entire stratum as well as all of stratum 2, with possibly some trees from stratum 3. The majority (60%) of the harvest volume for stratum 1 (3000 bd. ft/ac) would be contained in white oak (1015 bd. ft/ac), white ash (406 bd. ft/ac), and black oak (390 bd. ft/ac), with northern red oak, sugar maple, and various other species making up of the remainder of the harvest volume.

Most of the area would probably be harvested under a single tree selection routine with regeneration openings targeting groups of low-grade trees or multiple large trees growing together. When possible, selection should also favor releasing future crop trees. The residual should be heavily dominated with white oak and other oak species.

Post harvest TSI should be performed to eliminate any residual cull or small pole-sized trees not cut during the harvest, as well as thin where necessary, complete any regeneration openings, and treat the understory to eliminate shade tolerant species in favor of oaks and other more desirable species. As always, any ailanthus present should also be treated and eliminated.

Stratum 2: Mixed mesophytic

This 17-acre stratum contains a high volume of 8246 board feet per acre of which 4609 was classified as harvestable and 3637 was classified as residual. This would remove 47 square feet of basal area, which would leave the residual with 67 sq. ft. Stocking would drop from 105% to about 64% with the indicated management (fully stocked above the B-line).

Since there is no record of a harvest in this tract for at least 40 years, and because it currently contains a high volume of harvestable material and a moderate volume of residual growing stock, the recommendation would be that it should be included with stratum 1 as a medium priority for conducting a harvest. The majority (84%) of the harvest volume for stratum 1 (4609 bd. ft/ac) would be contained in white ash (1645 bd. ft/ac), black oak (862 bd. ft/ac), sugar maple (691 bd. ft/ac), and yellow-poplar (676 bd. ft/ac). The remainder would be contained in northern red oak, chinkapin oak, white oak, as well as a few other species.

Most of the area would probably be harvested under a single tree selection routine with larger regeneration openings targeting groups of low-grade trees or multiple large trees growing together. When possible, selection should also favor releasing future crop trees. The residual should still be heavy to red oak and sugar maple with a mix of other species making up the remainder.

Post harvest TSI should be performed to eliminate any residual cull or small pole-sized trees not cut during the harvest, as well as thin where necessary, complete any regeneration openings, and kill grapevines where present. As always, any ailanthus present should also be treated and eliminated.

Stratum 3: Old field - advanced

This 5-acre stratum occupies a smaller portion of the tract, and contains a volume of 4926 board feet per acre of which 3802 was classified as harvestable and 1124 was classified as residual. This would remove 96 square feet of basal area, which would leave the residual with 15 sq. ft. These figures DO include cedar as figured according to the cedar log scale. As a result, the stratum drops from about 105% stocked to off the chart understocked. This reflects removal of all of the cedar (majority of the volume) and low grade poplar, and so is really more of a regeneration cut on these small areas. Though, this is an advanced old field site clearly transitioning to yellow-poplar and other hardwoods, so removal of the cedar seemed appropriate. Conversion of this area would only involve less than 7% of the land area. Additional reserve trees can be left in the mixed mesophytic type to make up for the reduction of basal area in this area.

Since this type intermingles with the more merchantable hardwood types (and resembles it in places with the exception of cedar mixed in), there would likely be trees included from here along with any timber sale taking place in strata 1 and 2. Most of the harvest volume tallied (3802 bd. ft/ac) is represented by eastern redcedar (2023 bd. ft/ac) - due to use of the cedar scale, and yellow-poplar (1002 bd. ft/ac). A separate cedar sale would probably have to be undertaken to achieve optimal management, as most of these cedar would be removed to encourage poplar and the oak regeneration that is usually found in the understory of such strata. Ultimately, this site should be completely converted to hardwoods due to recovery of the site from former agricultural activities and erosion.

Much of this area is dominated with poplar, oak, hickory, and other hardwoods in the overstory with an abundance of eastern redcedar, beech, sassafras, and red maple in the midstory and understory. In places, there is oak regeneration in the understory ranging from seedling to sapling size. Timber harvest and post harvest TSI should concentrate on releasing this oak regeneration – mostly with larger openings and follow-up TSI.

Likely, a separate hardwood sale would be conducted from an exclusive cedar sale. The hardwood component would be marked in conjunction with strata 1 and 2 first. Subsequently, a cedar sale could be conducted to help release the oak regeneration that is present in this stratum. Finally, TSI would remove any leftover competing trees and allow a new group of oak and poplar to establish itself and grow here.

PROPOSED ACTIVITIES LISTING

Summer 2012	Field inventory
Fall 2012	Write mgmt plan
Spring 2013 - Fall 2013	Basal bark treat ailanthus
Fall 2012 - Spring 2013	Mark timber sale
Spring 2013	Sell timber sale
2014 / 2015	Post harvest TSI
2016	Recon & monitor for exotics
2027-2028	Inventory for next mgmt cycle

APPENDIX

(Various tables and graphs describing tract 2206)

A SUMMARY OF VARIOUS STATISTICS FOR TRACT 2206

Summary of basal area (sq ft per acre)

STRATUM	LEAVE	CUT	(SNAG)	TOTAL (live)
Oak hickory	61.6	61.9	??	123.5
Mixed mesophytic	67.2	46.8	??	114.0
Old field - advanced	15.0	96.2	??	111.2

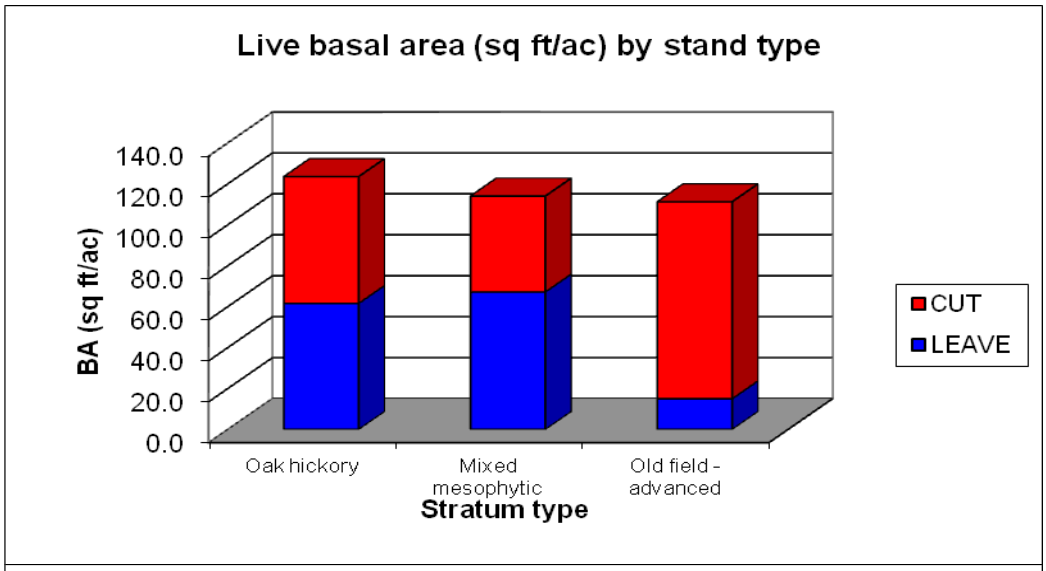
Summary of volume (bd ft per acre)

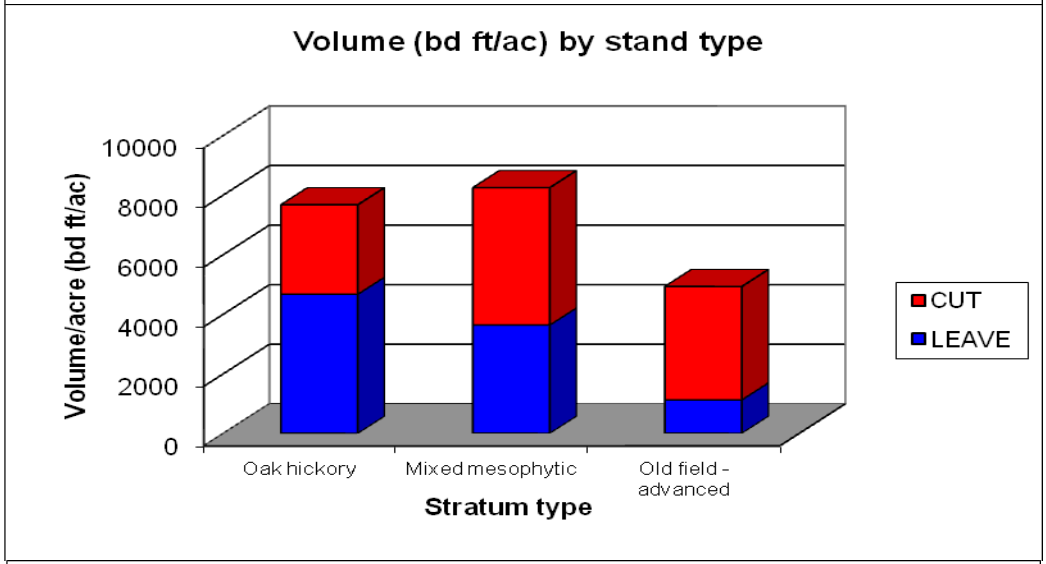
STRATUM	LEAVE	CUT	TOTAL (live)
Oak hickory	4671	3000	7671
Mixed mesophytic	3637	4609	8246
Old field - advanced	1124	3802	4926

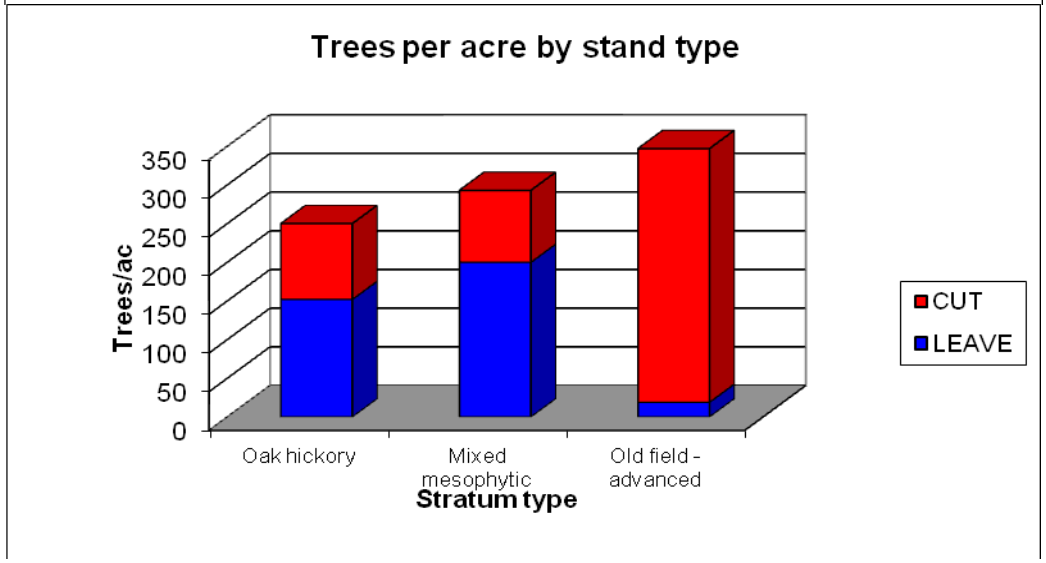
Summary of number of trees per acre

STRATUM	LEAVE	CUT	(SNAG)*	TOTAL (live)
Oak hickory	152	98	?	250
Mixed mesophytic	200	93	?	293
Old field - advanced	19	328	?	347

*snags/acre >= 9" DBH = 9.4/acre across entire tract


Live basal area (sq ft/ac) by stand type
BA (sq ft/ac)
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
Oak hickory
Mixed mesophytic
Old field - advanced
Stratum type
CUT
LEAVE


Volume (bd ft/ac) by stand type
Volume/acre (bd ft/ac)
10000
8000
6000
4000
2000
0
Oak hickory
Mixed mesophytic
Old field - advanced
Stratum type
CUT
LEAVE


Trees per acre by stand type
Trees/ac
350
300
250
200
150
100
50
0
Oak hickory
Mixed mesophytic
Old field - advanced
Stratum type
CUT
LEAVE

A SUMMARY OF VOLUME PER ACRE (bd ft/ac) BY SPECIES FOR TRACT 2206

Stratum 1: Oak hickory

Volume (bd ft/ac)

Species	CUT	LEAVE	TOTAL
AMB	31		31
BLO	390	588	978
ZCO	23	112	135
ERC	133		133
NRO	311	637	948
PIH	449	254	703
SHH		224	224
SUM	189	96	285
SYC	53		53
WHA	406	48	454
WHO	1015	2712	3727
TOTAL	3000	4671	7671

Stratum 2: Mixed mesophytic

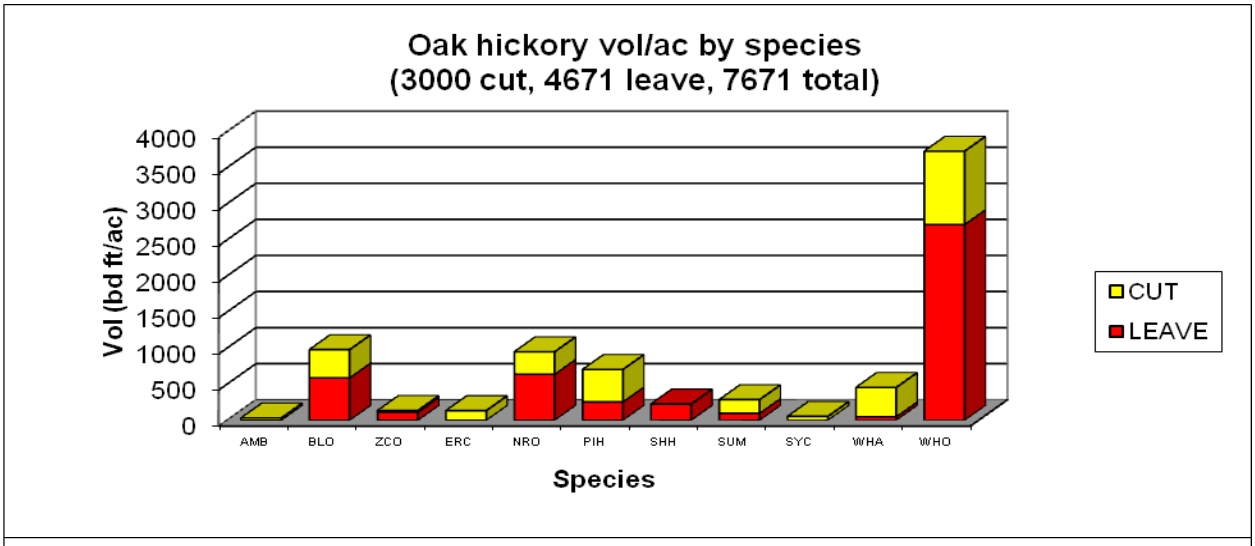
Volume (bd ft/ac)

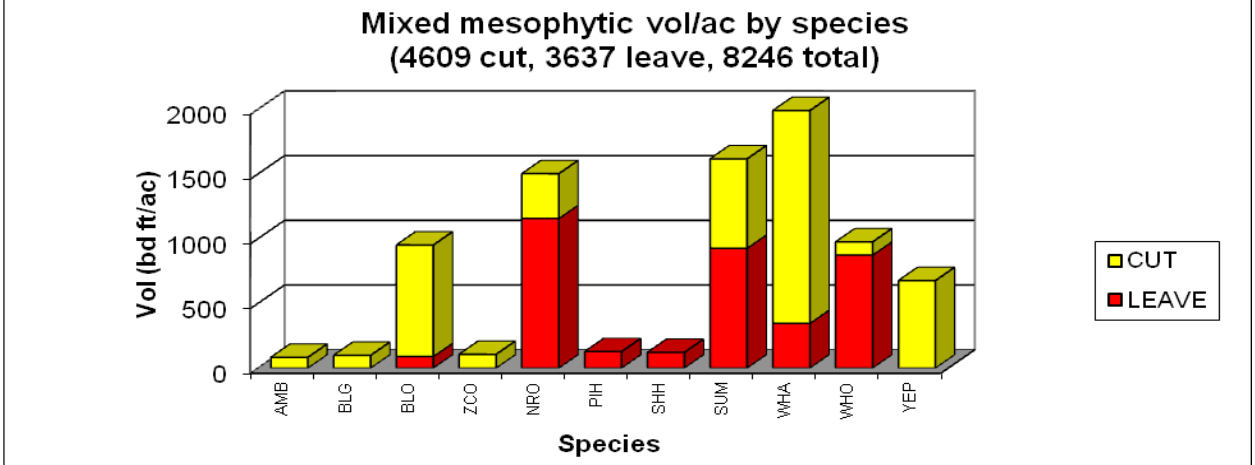
Species	CUT	LEAVE	TOTAL
AMB	83		83
BLG	98		98
BLO	862	89	951
ZCO	106		106
NRO	346	1156	1502
PIH		127	127
SHH		121	121
SUM	691	926	1617
WHA	1645	345	1990
WHO	102	873	975
YEP	676		676
TOTAL	4609	3637	8246

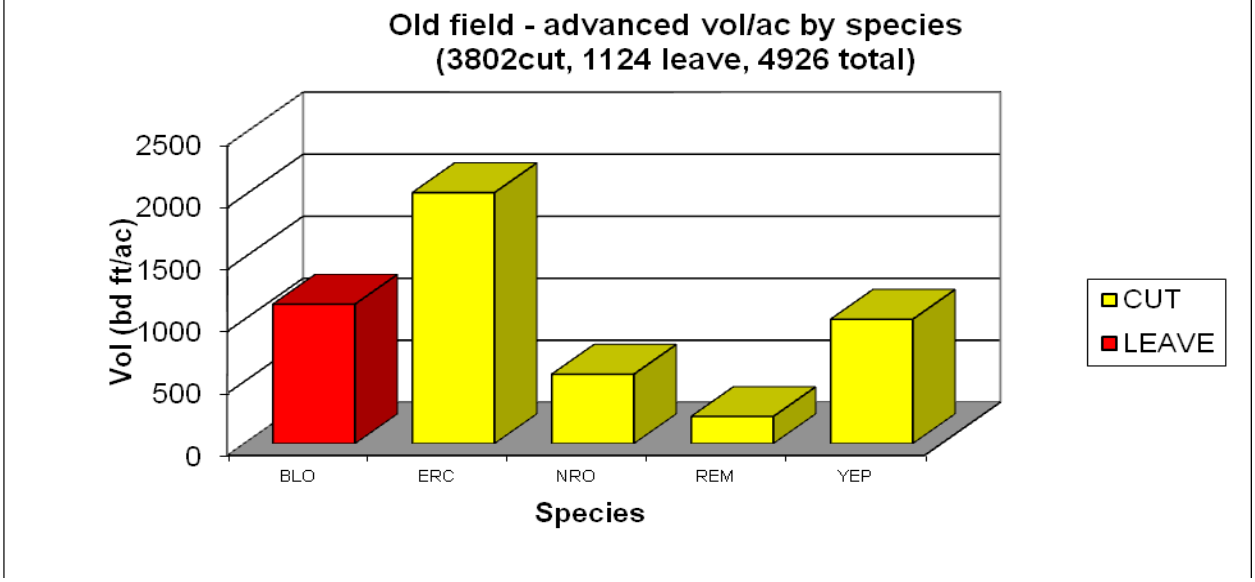
Stratum 3: Old Field - advanced

Volume (bd ft/ac)

Species	CUT	LEAVE	TOTAL
BLO		1124	1124
ERC	2023		2023
NRO	559		559
REM	218		218
YEP	1002		1002
TOTAL	3802	1124	4926


Oak hickory vol/ac by species
(3000 cut, 4671 leave, 7671 total)
Vol (bd ft/ac)
4000
3500
3000
2500
2000
1500
1000
500
0
AMB
BLO
ZCO
ERC
NRO
PIH
SHH
SUM
SYC
WHA
WHO
Species
CUT
LEAVE


Mixed mesophytic vol/ac by species
(4609 cut, 3637 leave, 8246 total)
Vol (bd ft/ac)
2000
1500
1000
500
0
AMB
BLG
BLO
ZCO
NRO
PIH
SHH
SUM
WHA
WHO
YEP
Species
CUT
LEAVE


Old field - advanced vol/ac by species
(3802cut, 1124 leave, 4926 total)
Vol (bd ft/ac)
2500
2000
1500
1000
500
0
BLO
ERC
NRO
REM
YEP
Species
CUT
LEAVE

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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.