**Indiana Department of Natural Resources - Division of Forestry**

**RESOURCE MANAGEMENT GUIDE**

**STATE FOREST**: Harrison Crawford **COMPARTMENT**: 8 **TRACT**: 08

**Date: August 5, 2008 – inventory** **Forester: Wayne Werne & Abby Irwin**
**January 24, 2011 - plan**

**INVENTORY SUMMARY**

| | | |
|---|---|---|
| **NUMBER OF STANDS:** | **2** | **Est. growth: 164 bd. ft/ac/yr **** |
| **PERMANENT OPENINGS:** | **0 ac** | **Est. cutting cycle: 15 yrs** |
| **TOTAL ACREAGE:** | **67.0 ac** | |
| **AVERAGE SITE INDEX:** | **70-80** (for upland oaks) | |
| **AVERAGE BASAL AREA:** | **120.8 sq. ft/ac** | |

****Growth** was calculated by using 2008 volume **MINUS cedar**, subtracting the volume of 494 bd. ft/ac from the 1973 inventory, taking into account the volume removed in the 1986 and 2005 sales, and dividing by 35 years of growth. Cedar volume was figured using a different cedar log scale (much more volume from small trees), which was not used in 1973.

**TRACT 808 TOTAL VOLUME (bd ft)**

| SPECIES | CUT per acre | CUT total | LEAVE per acre | LEAVE total | TOTAL per acre | TOTAL total |
|---|---|---|---|---|---|---|
| Black cherry | 219 | 14,673 | 280 | 18,760 | 499 | 33,433 |
| Black oak | 164 | 10,988 | 118 | 7,906 | 282 | 18,894 |
| Black walnut | | - | 193 | 12,931 | 193 | 12,931 |
| Boxelder | 14 | 938 | | - | 14 | 938 |
| Chinkapin oak | 16 | 1,072 | 26 | 1,742 | 42 | 2,814 |
| *Eastern redcedar** | *644* | *43,148* | *295* | *19,765* | *939* | *62,913* |
| Persimmon | 30 | 2,010 | 90 | 6,030 | 120 | 8,040 |
| Pignut hickory | | - | 84 | 5,628 | 84 | 5,628 |
| Red elm | | - | 28 | 1,876 | 28 | 1,876 |
| Sassafras | 253 | 16,951 | | - | 253 | 16,951 |
| Shagbark hickory | | - | 81 | 5,427 | 81 | 5,427 |
| Shingle oak | | - | 22 | 1,474 | 22 | 1,474 |
| Sugar maple | 271 | 18,157 | 963 | 64,521 | 1234 | 82,678 |
| Sycamore | 234 | 15,678 | 189 | 12,663 | 423 | 28,341 |
| White ash | 176 | 11,792 | 347 | 23,249 | 523 | 35,041 |
| White oak | | - | 27 | 1,809 | 27 | 1,809 |
| Yellow-poplar | 773 | 51,791 | 1023 | 68,541 | 1796 | 120,332 |
| **TTOTAL** | 2794 | 187,198 | 3766 | 252,322 | 6560 | 439,520 |

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

**STAND 1 – Mixed mesophytic** **ACREAGE: 61.1**

| | CUT | LEAVE | TOTAL | SNAG |
|---|---|---|---|---|
| VOLUME/ACRE: | 2,448 | 3,647 | 6,095 | |
| TOTAL VOLUME: | 149,573 | 222,832 | 372,405 | |
| BASAL AREA/ACRE: | 47.3 | 68.0 | 115.3 | |
| # TREES/ACRE: | 58 | 282 | 340 | |

**STAND 2 – Old field - ERC** **ACREAGE: 5.9**

| | CUT | LEAVE | TOTAL | SNAG |
|---|---|---|---|---|
| VOLUME/ACRE: | 7,292 | 5,342 | 12,634 | |
| TOTAL VOLUME: | 43,023 | 31,518 | 74,541 | |
| BASAL AREA/ACRE: | 105.0 | 72.5 | 177.5 | |
| # TREES/ACRE: | 245 | 453 | 698 | |

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

**TRACT BOUNDARIES:** This tract is bounded by private property along parts of its south boundary, all of its east boundary, and about half the length of its north boundary. The western portion of the north boundary is the ridgetop that separates it from tract 807 to the north. The fire trail / old road was used as this dividing line, but it diverged a bit to the south from where the GIS layer portrays the tract line to be, so about one acre was subtracted from 808's acreage and attributed to 807's acreage due to the obvious use of the road as an appropriate line of demarcation. The western boundary is the edge of the flat ridge that forms tract 806 to where it drops over the slope to 808. The western portion of the south boundary is what used to be a fenceline dividing it from private property that was purchased in the last 10 years and added onto the state ownership.

**ACCESS:** This tract can be accessed with difficulty from Lickford Bridge Road a mile and a half to the west, but more easily from an offshoot of Dixie Road to the south (Weber Lane) that dead ends on the recently acquired Wooten property which abuts tract 808. A possibility for access may also be via an old road that comes in from the east off of the neighboring Ripperdam property. This old road joins into the old road that forms the ridgetop fire trail that borders the north portion of tract 808. Apparently this may have been used previously as an access when it was last cut in the 1986 sale. There has been a new house constructed back here, though, so it may be less likely to be available for an access across private property.

**ACQUISITION HISTORY:** All of the land that makes up this tract was purchased in 1946 from Ewing and Esther Finn for a price of $8.50 per acre (deed #131.146)

**TRACT DESCRIPTION:** This tract was divided into two stands based on cover type and past management. These stands include: mixed mesophytic and old field - cedar. These stands will be described in detail below.

**Stand 1 – Mixed mesophytic**

This 61-acre stand covered the vast majority of the tract, and consisted of typical mixed mesophytic species – primarily yellow-poplar, sugar maple, white ash, and black cherry. Similar to the neighboring tract 806, this stand had a noticeably higher amount of cherry growing in it compared to other stands in other tracts. This stand occupies the slopes and coves, and most of the bottom along the drainage. There was one area on the lower slopes that contained a stand of very large ailanthus trees, but these were treated several years ago. Further monitoring will be needed to see how effective this treatment was.

The total volume of the stand (6,095 bd. ft/ac) is composed primarily of yellow-poplar (1,825 bd. ft/ac), sugar maple (1,330 bd. ft/ac), white ash (562 bd. ft/ac), and black cherry (537 bd. ft/ac) which make up 70% the total volume. Sycamore, black oak, sassafras, and black walnut make up most of the rest of the volume, along with various other species.

**Stand 2 – Old field - cedar**

This 6-acre stand was found mostly in the southwestern corner of the tract, and consisted of cedar mostly with some yellow-poplar. It was obviously an open agricultural field at one time, and has since succeeded back to its current state, although from looking at the old aerial photos, more of the lower slopes along the drainage were also cleared, but they were apparently not as degraded, as they now contain a better stand of hardwood trees.

The total volume of the stand (12,634 bd. ft/ac) is composed entirely of eastern redcedar (11,204 bd. ft/ac), and yellow-poplar (1,430 bd. ft/ac). 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.

**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.

**WbF Weikert-Berks channery silt loams, 35-60% slopes** Virginia pine SI is 45-53, est. growth is 75-100 bd. ft/ac/yr.

**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.

**ZaC2 Zanesville silt loam, 6-12% 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.

**Hm Haymond silt loam** 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.

**HgC3 Hagerstown silty clay loam, 6-12% 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.

**Gu Gullied land** Virginia pine SI is 53-72, est. growth is 100-200 bd. ft/ac/yr.

**CtC3 Crider soils, 6-12% 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.

**WeC2 Wellston silt loam, 6-12% 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.

**RECREATION:** This tract is part of an outlying piece of state forest property south of the main property that is not joined to the rest of the property. It is surrounded by private land on about half its boundary, and has limited access via the neighboring state forest property, and as such, probably receives limited recreational use. It is likely that some hunting is done on this piece by neighbors and members of the public in general. But due to a lack of trails and connection to a larger block of public land, this is probably the extent of any recreation that actually takes place here.

There is a cave on neighboring private property, and some open sinkholes on this tract, as well as one "cave" which was called Buzzard's Crevice due to active use by vultures which flew out during exploration. It is more of a rock shelter than a cave, but the presence of these karst features may lead to some use of the tract by cavers.

Due to its isolation from the main body of the state forest, this whole area of Wolfpen Ridge does also get illegal use from the public more so than the main property. When the previous neighbor to the south still lived there, illegal horseback riding and littering with beer cans was also rampant. Illegal ATV use is also likely going on here.

**WILDLIFE:** This tract provides habitat for a variety of forest-dwelling wildlife of many forms, including game species such as deer, squirrels, raccoons, and turkeys, as well as nongame species such as woodpeckers, songbirds, and reptiles and amphibians. Most of the tract is of the mixed mesophytic stand type, but the old field - cedar stand provides denser cover for bedding areas, especially during the winter months. Minimal amounts of hard mast producing species were noted in this tract, and so food sources from nuts are very limited (mostly walnuts), but the presence of persimmon trees provides for a good soft mast source.

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.

<u>Guidelines for preferred density of live and dead trees for use by Indiana bat</u>:

| **# of live trees per acre** | **Guidelines maintenance** | **Tract 808 actual present – harvest = residual** |
|---|---|---|

| | | |
|---|---|---|
| **12”-18” DBH class** | **6** | **41.0 – 14.8 = 26.2** |
| **20” DBH and greater** | **3** | **10.4 - 5.2 = 5.2** |
| **Total** | **9** | **51.4 - 20.0 = 31.4** |

| **# snags per acre** | **Guidelines maintenance** | **Guidelines optimal** | **Tract 808 actual** |
|---|---|---|---|
| **6” - 8” DBH class** | **1** | **1** | **30.2** |
| **10”-18” DBH class** | **2.5** | **5** | **7.3** |
| **20” DBH and greater** | **0.5** | **1** | **0.4** |
| **Total** | **4** | **7** | **37.9** |

These numbers show that both live tree densities as well as snag densities meet guidelines on this tract – except for the category of large snags. 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 slightly 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 below target 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. There may be some conversion of cedar or the old field area to temporarily open areas up that will be allowed to succeed into native hardwoods, and this would change the character of the tract over time, but will not change it into a permanently nonforested cover type. Creation of regeneration openings will create early successional 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. The small pond found just north of this tract on the ridgetop would provide a valuable water source

for wildlife during dry periods, and also represents good habitat for reptiles and especially amphibians.

Since this tract represents a component of contiguous forest, it is possible that forest management activities might disrupt any forest interior species by creating edge habitat for generalist species to "invade" the area. This would possibly occur if regeneration openings were put in place that offered a habitat preferred by such generalist species which might move in and start using such habitat. In the context of the surrounding landscape, this tract represents a moderate chunk of forest in a surrounding matrix of approximately 50% forest and 50% grassland/pasture/cropland.

**WATERSHED / HYDROLOGY:** The majority of the tract contains gentle to moderately steep slopes that drain into an intermittent drainage that flows through the southeastern portion of the tract, and dumps into Blue Spring Hollow about a mile to the southwest. Blue Spring Hollow drains into Indian Creek to the west, which shortly dumps into the Ohio River.

This area lies within a karst landscape with underground drainage, and several closed and open sinkholes were located here, as well as a short cave developed into the sandstone bedrock where it protrudes out onto the hillside. The ridgetop portion may be high enough in elevation that a sandstone caprock layer overlies the limestone over some of the tract. The lower slopes and drainage appear to have a potentially extensive karst system, so much of the hydrology would consist of subsurface drainage.

**HISTORICAL AND CULTURAL:** 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.

**OTHER CONCERNS:** The natural heritage database check did not show any rare, threatened, or endangered plant or animal species located within this tract, or nearby to it.

**SILVICULTUAL PRESCRIPTION:**

**General:** Utilizing records of the past history of this tract, an inventory done in 1973 indicated a total standing volume of 494 board feet per acre. In 1986, there was a timber sale marked and sold that encompassed the western portion of this tract, as well as tract 805. This removed 91,600 board feet – mostly sugar maple and yellow-poplar – and 38,100 of this came from tract 808. There were several regeneration openings created that were invaded by ailanthus afterward. The file indicates that TSI was performed the following year, or shortly thereafter. There were also 10 trees totaling 2910 board feet taken out of this tract in the salvage sale that encompassed several tracts in this area following the wind damage in 2005.

The 2008 inventory shows between 5621 (no cedar) and 6560 board feet per acre, and this figures out to a growth rate of about 164 board feet per acre per year, after dividing the difference by 35 years of growth since the last inventory, and taking into account the volume removed in the two sales. Cedar volume was figured using a different cedar log scale (much more volume from small trees), which was not used in 1973, and this is why cedar volume is being excluded from growth calculations, as it was probably given marginal volume in 1973.

The growth figures are respectable considering a portion of this tract is cedar growing on a degraded site, and additional acreage was being farmed in the 1940's. 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 long-term conversion of the cedar occupying the old field areas to a better crop of hardwood trees.

Number of trees per acre and basal area per acre figures indicate that stand 1 is overstocked at 105%, while stand 2 is way off the charts at about 200% (but this is inclusive of many small cedar stems). Removal of trees tallied as "cut" either via a timber sale or TSI would reduce the stocking levels to 70% stocking in the hardwood stand, and about 80% in the old field area.

Due to the amount of volume being carried on the majority of the tract (5621 bd. ft/ac – not including cedar), the length of time since the last managed sale on a portion of the tract (23 years back to 1986), and the general condition of the overstory trees in the older hardwood portion of the tract, the initial impression was that a medium level improvement harvest could be undertaken in this tract at any time. This would produce a sale volume of about 140,000 board feet (not including cedar) or about 2150 board feet per acre and leave about 230,000 board feet plus 63,000 board feet of cedar, or about 3470 board feet per acre of hardwood and 940 board feet per acre of cedar (according to the cedar log scale). This sale would cover the majority of the tract – with minimal amounts of hardwood being removed from stand 2. Likely a separate cedar sale would be undertaken in that stand to remove the cedar exclusively.

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. Vines did not seem to be a big problem in this tract, but need to be kept at bay with TSI activities as well. Most of the TSI will probably be targeted at the old field areas where the composition and stocking could be improved from what currently occupies most of this area. Ailanthus needs to be monitored and eliminated when found to be present or establishing itself. All ailanthus should be killed pre-harvest. There were several areas of ailanthus found throughout the tract – usually where windthrow has opened up patches of sunlight to the ground, or where regeneration openings from the 1986 sale were located.

**Stand 1: Mixed mesophytic**

This 61-acre stand covers the majority of the tract, and contains a moderate amount of volume of 6095 board feet per acre of which 2448 was classified as harvestable and 3647 was classified as residual. This would remove 47 square feet of basal area, which would leave the residual stand with 68 sq. ft. Stocking would drop from 105% to about 70% (fully stocked above the B-line) with the indicated management. These figures DO include cedar as figured according to the cedar log scale.

Since this stand was last harvested 23 years ago, and currently contains a reasonable volume of harvestable material and a moderate amount of residual growing stock volume, the recommendation would be to rank this stand as a medium priority for conducting a harvest. Any timber sale would primarily include this entire stand as well as some trees from stand 2. The majority (75%) of the harvest volume for stand 1 (2448 bd. ft/ac) would be contained in yellow-poplar (816 bd. ft/ac) sugar maple (292 bd. ft/ac), sassafras (272 bd. ft/ac), sycamore (252 bd. ft/ac), and black cherry (236 bd. ft/ac). The remainder would be contained in white ash, black oak, eastern redcedar, and various other species.

Most of the stand would probably be harvested under a single tree or group 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. Drought damage to yellow-poplar should be a factor considered when selecting trees to mark for sale.

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. There are several pockets of ailanthus that were treated in a contract ailanthus control project several years ago, but should be rechecked and retreated pre-harvest. Some of these were large seed producing trees, and likely have inundated the area with seed for years, and are also likely to produce numerous root sprouts.

**Stand 2: Old field - cedar**

This 6-acre stand is located in the southwestern corner of the tract, and contains a volume of 12,634 board feet per acre of which 7292 was classified as harvestable and 5342 was classified as residual. This would remove 105 square feet of basal area, which would leave the residual stand with 73 sq. ft. Stocking would drop from about 200% to about 80% with the indicated management (fully stocked above the B-line). These figures DO include cedar as figured according to the cedar log scale, as the vast majority of this stand is composed of cedar.

Since this stand intermingles with the more merchantable hardwood stands, there would likely be some trees included from here along with any timber sale taking place in stand

1. The overwhelming majority (97%) of the harvest volume for stand 2 (7292 bd. ft/ac) would be contained in eastern redcedar (7074 bd. ft/ac), with yellow-poplar making up of the remainder of the harvest volume. 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 stands. Ultimately, this site should be completely converted to hardwoods due to recovery of the site from former agricultural activities and erosion. Timber harvest and post harvest TSI should concentrate on releasing any oak regeneration that is present. TSI should be done to eliminate any cull or low grade trees, and to control any ailanthus or vines still present.

**PROPOSED ACTIVITIES LISTING**

| | |
|---|---|
| Summer 2008 | Field inventory |
| Winter 2010 | Write mgmt plan |
| Summer 2011 - Fall 2011 | Basal bark treat ailanthus |
| Fall 2011 – Spring 2013 | Mark timber sale |
| Spring 2012 - Spring 2013 | Sell timber sale |
| 2013 / 2014 | Post harvest TSI |
| 2018 | Recon & monitor for exotics |
| 2025-2030 | Inventory for next mgmt cycle |

**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.

## APPENDIX

## (Various tables and graphs describing tract 808)

A SUMMARY OF VARIOUS STATISTICS FOR TRACT 808

Summary of basal area (sq ft per acre)

| STAND | LEAVE | CUT | (SNAG) | TOTAL (live) |
|---|---|---|---|---|
| Mixed mesophytic | 68.0 | 47.3 | ?? | 115.3 |
| Old field - ERC | 72.5 | 105.0 | ?? | 177.5 |

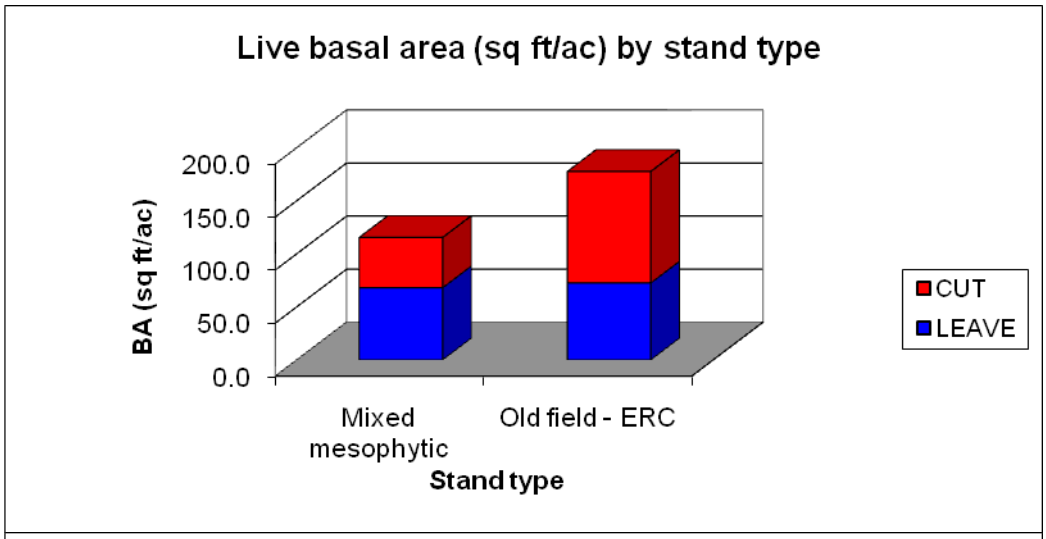
Summary of volume (bd ft per acre)

| STAND | LEAVE | CUT | TOTAL (live) |
|---|---|---|---|
| Mixed mesophytic | 3647 | 2448 | 6095 |
| Old field - ERC | 5342 | 7292 | 12634 |

Summary of number of trees per acre

| STAND | LEAVE | CUT | (SNAG)* | TOTAL (live) |
|---|---|---|---|---|
| Mixed mesophytic | 282 | 58 | ? | 340 |
| Old field - ERC | 453 | 245 | ? | 698 |

*snags/acre >= 9" DBH = 7.7/acre across entire tract


Live basal area (sq ft/ac) by stand type
BA (sq ft/ac)
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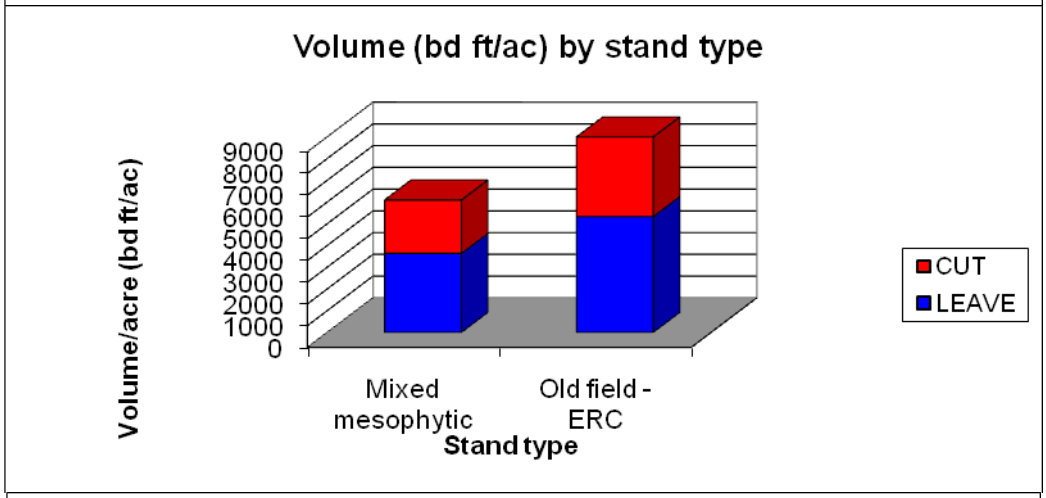
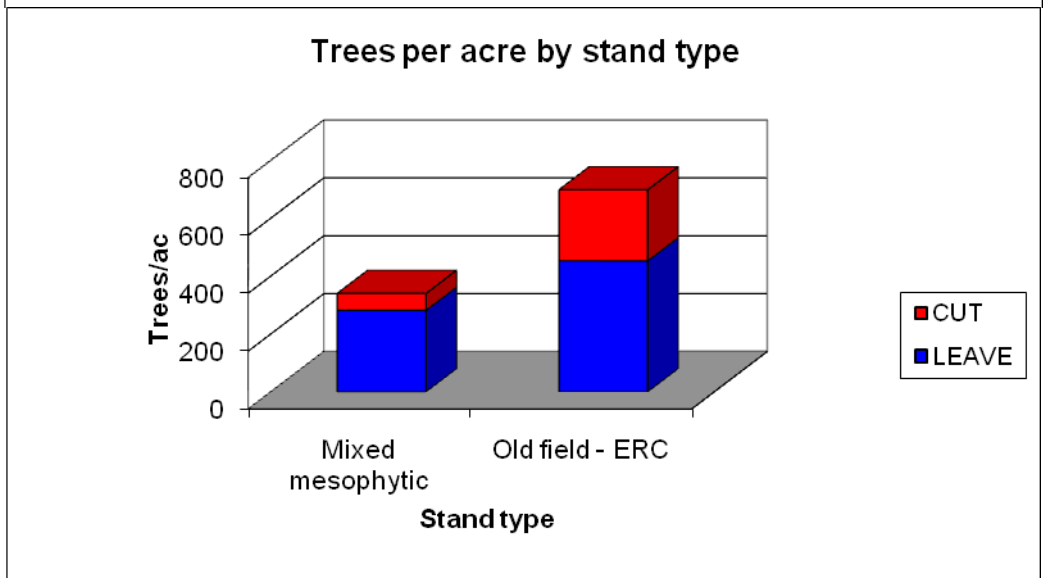
100.0
50.0
0.0
Mixed mesophytic
Old field - ERC
Stand type
CUT
LEAVE


Volume (bd ft/ac) by stand type
Volume/acre (bd ft/ac)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Mixed mesophytic
Old field - ERC
Stand type
CUT
LEAVE


Trees per acre by stand type
Trees/ac
800
600
400
200
0
Mixed mesophytic
Old field - ERC
Stand type
CUT
LEAVE

A SUMMARY OF VOLUME PER ACRE (bd ft/ac) BY SPECIES FOR TRACT 808

Stand 1: Mixed mesophytic

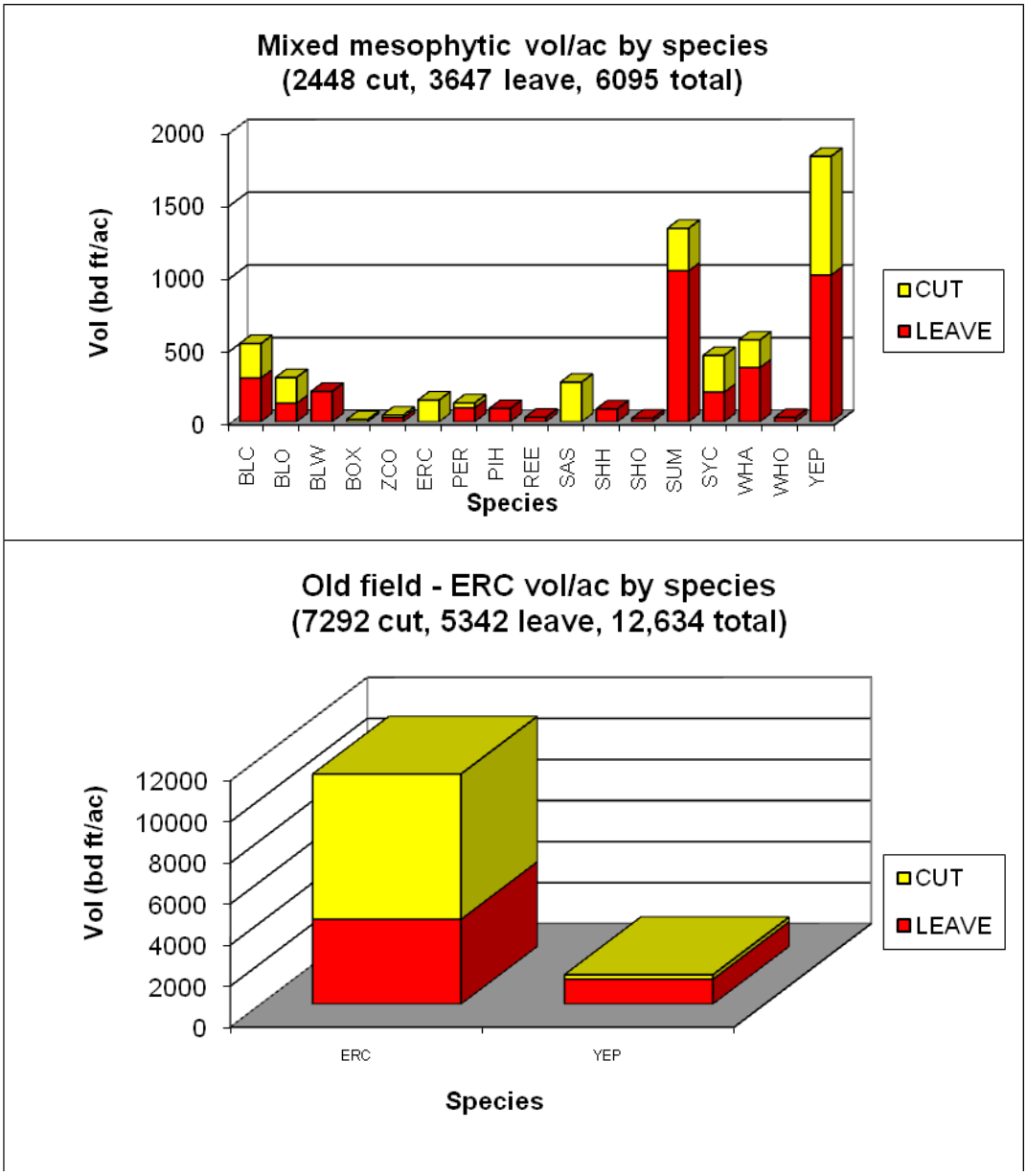
Volume (bd ft/ac)

| Species | CUT | LEAVE | TOTAL |
|---|---|---|---|
| BLC | 236 | 301 | 537 |
| BLO | 177 | 127 | 304 |
| BLW | | 208 | 208 |
| BOX | 15 | | 15 |
| ZCO | 17 | 28 | 45 |
| ERC | 149 | | 149 |
| PER | 33 | 97 | 130 |
| PIH | | 91 | 91 |
| REE | | 30 | 30 |
| SAS | 272 | | 272 |
| SHH | | 88 | 88 |
| SHO | | 24 | 24 |
| SUM | 292 | 1038 | 1330 |
| SYC | 252 | 204 | 456 |
| WHA | 189 | 373 | 562 |
| WHO | | 29 | 29 |
| YEP | 816 | 1009 | 1825 |
| TOTAL | 2448 | 3647 | 6095 |

Stand 2: Old field - ERC

Volume (bd ft/ac)

| Species | CUT | LEAVE | TOTAL |
|---|---|---|---|
| ERC | 7074 | 4130 | 11204 |
| YEP | 218 | 1212 | 1430 |
| TOTAL | 7292 | 5342 | 12634 |


Mixed mesophytic vol/ac by species
(2448 cut, 3647 leave, 6095 total)
Vol (bd ft/ac)
2000
1500
1000
500
0
BLC
BLO
BLW
BOX
ZCO
ERC
PER
PIH
REE
SAS
SHH
SHO
SUM
SYC
WHA
WHO
YEP
Species
CUT
LEAVE
Old field - ERC vol/ac by species
(7292 cut, 5342 leave, 12,634 total)
Vol (bd ft/ac)
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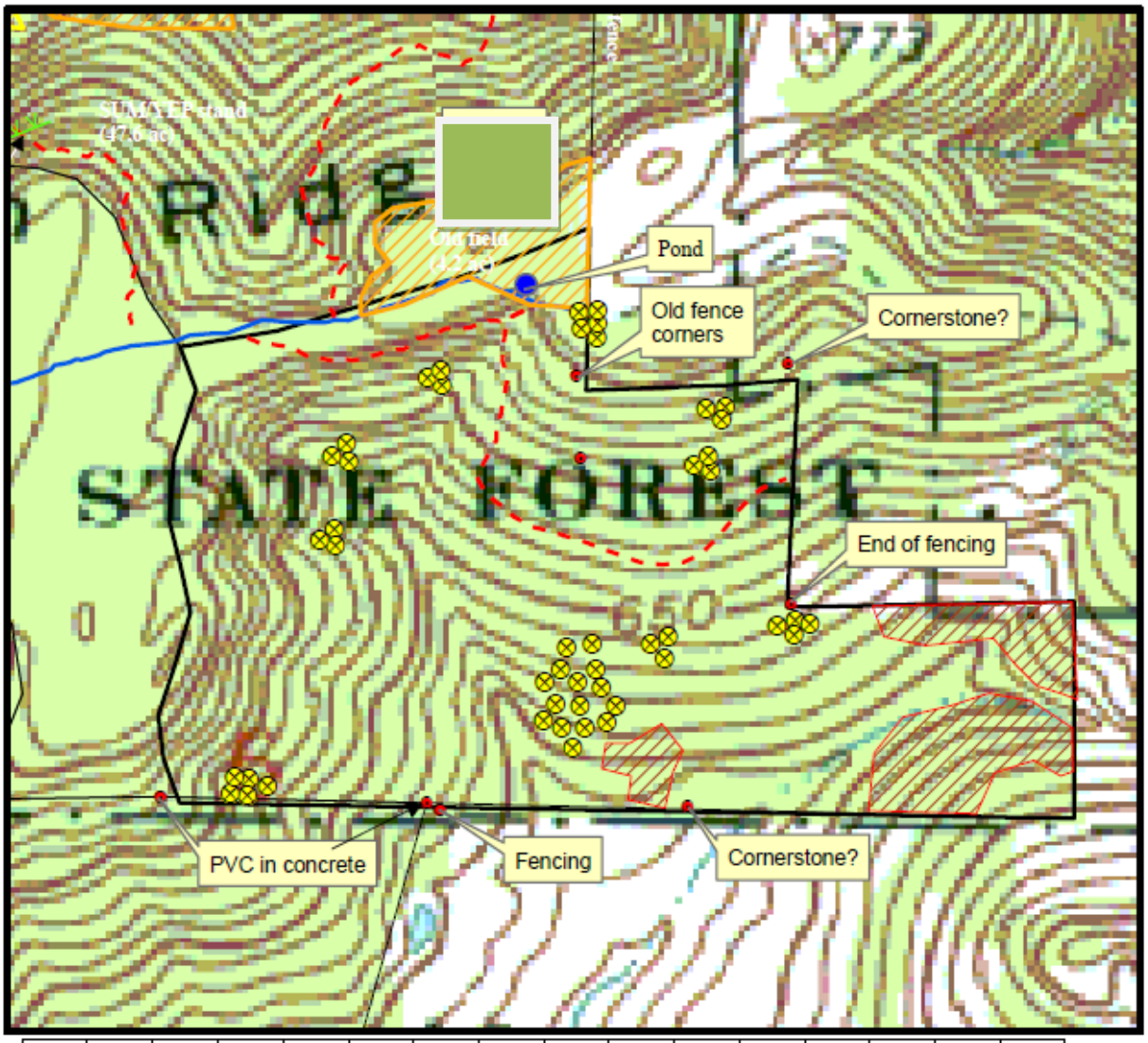
10000
8000
6000
4000
2000
0
ERC
YEP
Species
CUT
LEAVE

# Tract 0808




**Legend**

- 808 Cave
- 808 Corners
- Wolfpen Firetrail
- Tract 808
- Old roadbeds
- Ailanthus - multiple stems

**Stand 1: Mixed mesophytic (61.1 ac)**

**Stand 2: Old field - cedar (5.9 ac)**

N
W E
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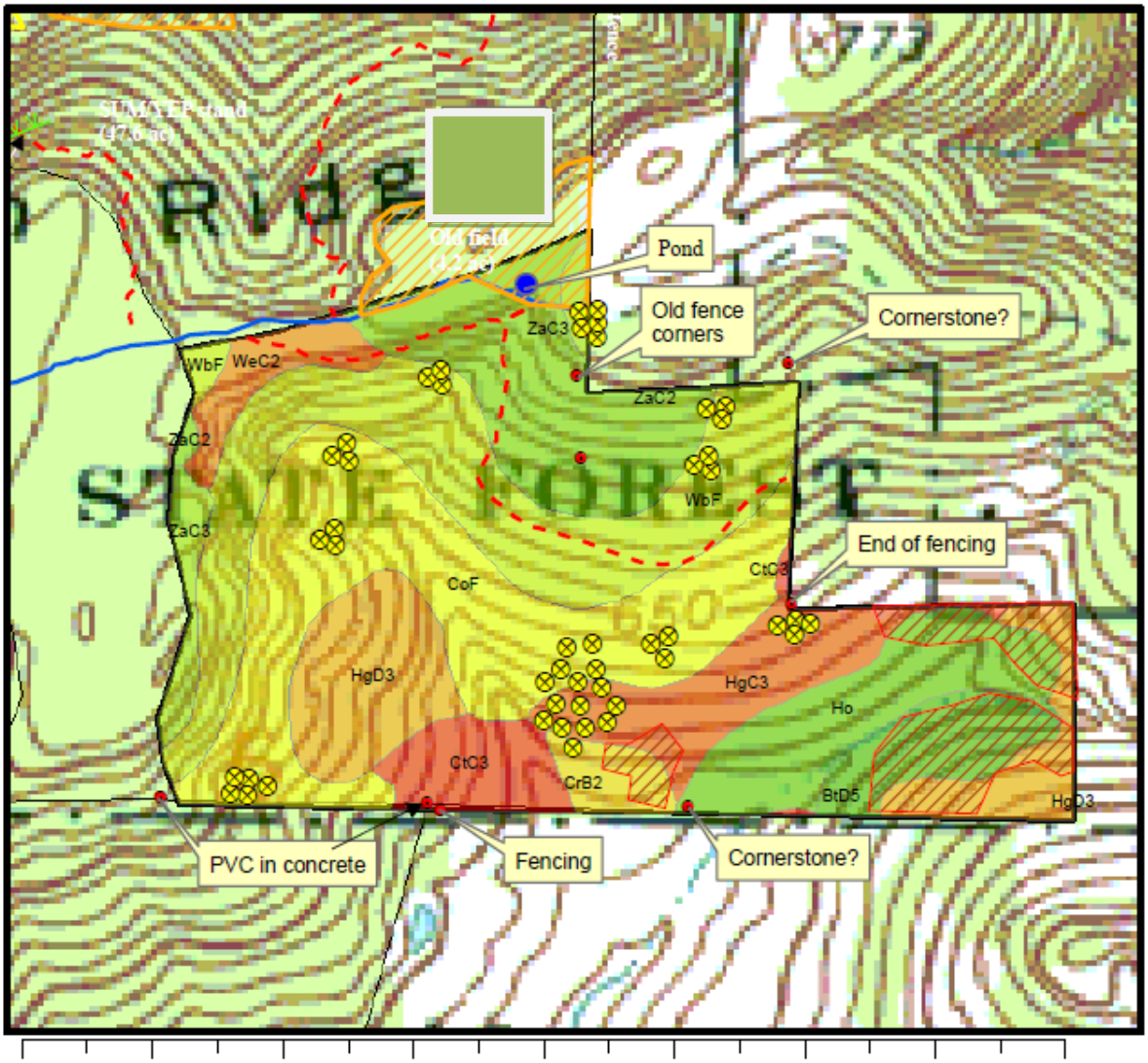
# Tract 0808 Soils




0 375 750 1,125 1,500 1,875 2,250 2,625 3,000 Feet

## Legend

- 808 Cave
- 808 Corners
- Wolfpen Firetrail
- Tract 808
- Old roadbeds
- Ailanthus - multiple stems

Stand 1: Mixed mesophytic (61.1 ac)

Stand 2: Old field - cedar (5.9 ac)

N
W E
S