

RESOURCE MANAGEMENT GUIDE

STATE FOREST Clark

COMPARTMENT 14

TRACT 4

INVENTORY SUMMARY

ACREAGE IN:

Commercial Forest <u>125 Acres</u>	Total B.A./Acre <u>107.7 ft²</u>
Non-Commercial Forest <u>0</u>	B.A. ≥ 10" <u>80.6 ft²</u>
Recreation Use <u>Knobstone Trail</u>	B.A. ≤ 10" <u>27.1 ft²</u>
Permanent Openings <u>0</u>	
Other Uses	
TOTAL AREA <u>125 Acres</u>	

Estimated Per Acre Volumes for Commercial Forest Area - Bd., Ft., Doyle Rule

<u>Harvest / Leave Summary</u>				
Species	Harvest Stock MBF	Growing Stock MBF	Total MBF	BF/Ac
American beech	2.35	-	2.35	19
American sycamore	-	5.98	5.98	48
black cherry	-	3.91	3.91	31
black gum	-	1.85	1.85	15
black oak	19.34	10.61	29.95	240
chestnut oak	11.7	27.96	39.66	317
red oak	4.94	-	4.94	40
pignut hickory	1.63	3.78	5.41	43
red maple	4.94	1.11	6.05	48
scarlet oak	51.13	16.66	67.79	542
shagbark hickory	-	1.11	1.11	9
sugar maple	-	5.06	5.06	40
sweetgum	-	6.37	6.37	51
Virginia pine	164.37	4.26	168.63	1349
white ash	3.5	1.88	5.38	43
white oak	78.97	291.36	370.33	2963
yellow poplar	-	1.71	1.71	14
Tract Totals (MBF)	342.87	383.61	726.48	
Per Acre Totals (BF)	2,743	3,069		5,812

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FORESTERS NARRATIVE

(Describe the area/timber/wildlife - Present stand, soils, regeneration potential, condition, timber types, private boundaries, forest protection, etc.)

Location

Compartment 14, tract four is predominately located in the southwest ¼ of section 27, T1N, R6E, Clark County, Indiana.

Hardwoods

This tract is dominated by white oak sawtimber. White oak sampled at 2,960 board feet per acre, making up 51% of total sawtimber volume. Scarlet oak is the next most prevalent hardwood with 540 board feet per acre (9.3%), followed by chestnut oak at 320 board feet per acre (5.5%).

The pole timber (6-12") size class is also dominated by white oak stems; sampling at the rate of 13 trees per acre, comprising 26% of all pole timber.

Sub-merchantable stem sampling was led by pignut hickory, 29 trees per acre (22%), followed by red maple at 26 trees per acre, black oak 12 trees per acre (9%), white ash 12 trees per acre (9%), and sugar maple 9 trees per acre (7%)

White oak, black oak, and scarlet oak regeneration are very strong and advanced throughout the tract on the ComC, ConD, and GmaG soils.

Pine

Pine stands on approximately 17 acres of this tract. There seems to be correlation between Virginia pine and the GmaG soil series. The GmaG is moist bottom land soil and may have been an old agriculture site before being converted to Virginia pine plantation. Pine probably covered up to 30 acres of this tract. Several acres of Virginia pine in the Bowery drainage have succumbed to sugar maple regeneration. There are 1,350 board feet of pine per acre in this tract, making up 23% of sawtimber volume. There are also nine Virginia pine poles, and 12 submerchantable stems per acre.

Access

This tract is easily accessed from the south via Reed Road, or the Flower Gap fire trail.

Boundaries

Of 3,743 meters of tract boundary, approximately 1,300 (29%) are shared with private property; the Carter-Hauser 80 acre inholding to the west, and another 30 acres to the east outside the forest boundary.

Indiana bat

Both live tree size classes exhibit sufficient stems of preferred roost trees for sufficient bat habitat. Both size classes of snags are deficient across the tract for adequate roost trees. Additional snags may be created through the T.S.I. process proceeding a timber harvest.

	Bat Management Guidelines			
	Live Trees per Acre		Snags per Acre	
Live 11"≤19" Snags 9"≤19"	1,500	3,324	750	685
Live ≥ 20" Snags ≥ 19"	375	450	125	34

Cultural Resources

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.

Recreation

The Knobstone Trail passes through the western edge of the tract. C14T4 is also bordered to the south by a horse trail.

Natural Heritage Database Review

No species of special concern were noted in the NHDR for this tract.

Soils

BcrAW—Beanblossom silt loam, 1 to 3 percent slopes, occasionally flooded, very brief duration

Setting

Landform: Flood plains

Landform position: Natural levees and alluvial fans

Soil Properties and Qualities

Parent material: Channery, loamy alluvium

Depth class: Deep (40 to 60 inches)

Drainage class: Moderately well drained

Water table depth: 3.5 to 5.0 feet (apparent)

Available water capacity to a depth of 60 inches: About 6.3 inches

Composition

Beanblossom and similar soils: 90 percent
Dissimilar inclusions: 10 percent

- A deep, somewhat poorly drained soil in drainageways
- Beanblossom soils, frequently flooded, on flood plains and alluvial fans
- A moderately deep soil over hard black shale

ComC—Coolville silt loam, 6 to 12 percent slopes

Setting

Landform: Hills underlain with shale or siltstone
Landform position: Shoulders and backslopes

Soil Properties and Qualities

Parent material: Thin loess and clayey residuum
Depth class: Deep (40 to 60 inches)
Drainage class: Moderately well drained
Water table depth: 1 to 2 feet (perched)
Available water capacity to a depth of 60 inches: About 6.6 inches

Composition

Coolville and similar soils: 86 percent
Dissimilar inclusions: 14 percent

- Coolville soils, severely eroded on shoulders and the upper part of backslopes
- Rarden soils on backslopes
- Weddel soils on summits
- Stonehead soils on summits
- Stendal soils on toeslopes

ConD—Coolville-Rarden complex, 12 to 18 percent slopes

Setting

Landform: Hills underlain with shale or siltstone
Landform position: Shoulders and backslopes

Soil Properties and Qualities

Coolville

Parent material: Thin loess and clayey residuum
Depth class: Deep (40 to 60 inches)
Drainage class: Moderately well drained
Water table depth: 1 to 2 feet (perched)
Available water capacity to a depth of 60 inches: About 6.5 inches

Rarden

Parent material: Clayey residuum
Depth class: Moderately deep (20 to 40 inches)
Drainage class: Moderately well drained
Water table depth: 1 to 2 feet (perched)
Available water capacity to a depth of 60 inches: About 4.7 inches

Composition

Coolville and similar soils: 53 percent
Rarden and similar soils: 28 percent
Dissimilar inclusions: 19 percent

- Kurtz soils on backslopes
- Gnawbone soils on backslopes
- Deam soils on backslopes
- Coolville soils with 4 to 12 percent slopes on summits and shoulders

GmaG—Gnawbone-Kurtz silt loams, 20 to 60 percent slopes

Setting

Landform: Hills underlain with siltstone
Landform position: Backslopes

Soil Properties and Qualities

Gnawbone

Parent material: Silty residuum
Depth class: Moderately deep (20 to 40 inches)
Drainage class: Well drained
Available water capacity to a depth of 60 inches: About 6.0 inches

Kurtz

Parent material: Silty residuum
Depth class: Deep (40 to 60 inches)

Drainage class: Well drained

Available water capacity to a depth of 60 inches: About 7.1 inches

Composition

Gnawbone and similar soils: 48 percent

Kurtz and similar soils: 32 percent

Dissimilar inclusions: 20 percent

- Coolville soils on shoulders and summits
- Wellrock soils on shoulders and summits
- Beanblossom soils on flood plains
- Stonehead soils on shoulders and summits
- A very deep, well drained soil formed in colluvium on footslopes

TM 903

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SILVICULTURAL PRESCRIPTION

(Describe silvicultural practices needed [if any] - Harvest, TSI, Tree Planting, Wildlife Habitat, Erosion Control, Natural Regeneration, etc.)

Compartment 14, tract four's overstory is in nearly continuous white oak sawtimber except on the wetter Beanblossom soils in the Bowery Creek bottomlands. The dry-mesic white oak stands exhibit excellent oak regeneration throughout the tract. A selective thinning would be very beneficial to these stands; removing decaying scarlet oak and selecting for future high quality white oak stems while allowing additional sunlight to reach oak seedlings, further advancing the regeneration layer. Beanblossom soils show evidence of past Virginia pine stands that have given way to a mosaic of yellow poplar, sugar and red maple poles. Now is the time to selectively guide these young stands and select for future crop trees by removing residual pine, poorly formed pole stems, and other undesirable stems.

This stand is up for consideration for harvest in 2009-2010. Currently this stand is nearly overstocked at 108 ft² per acre, or 98% stocked. It is recommended up to 2,000 board feet per acre be extracted in order to release white oak sawtimber and further advance the strong oak regeneration present within the tract lowering the stocking to between 60 and 70 percent. Virginia pine should be heavily marked where still present in order to release more desirable hardwood stems where applicable.

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SPECIFIC PRACTICES FOR ACCOMPLISHMENT

(Tree Planting, TSI, Harvesting, Special Product Sales, Wildlife Habitat Work, Erosion Control, Unique Area, Recreation, etc.)

<u>Year Planned</u>	<u>Practice</u>	<u>Year Accomplished</u>
2010	Thinning harvest/Pine removal	
2012	Post Harvest TSI	
2032	Re-evaluate for regeneration harvest	

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