

TM 901			
RESOURCE MANAGEMENT GUIDE			
INVENTORY SUMMARY			
		Compartment:	9
Jackson-Washington State Forest		Tract:	20
Forester:	Brian Bailey	Date:	8/9/07

ACREAGE IN:			
Commercial Forest	70	Average Site Index	73
TOTAL AREA	70	Avg. Annual Growth	147.7
		Total B.A./Acre	119.1

(Estimated Tract Volumes for Commercial Forest Area-Bd.Ft., Doyle Rule)

SPECIES	GROWING STOCK	HARVEST STOCK	TOTAL VOLUME
American Beech	1,110		1,110
American Sycamore	4,170	1,530	5,700
Black Cherry	2,050	940	2,990
Black Oak	44,380	18,940	63,320
Chestnut Oak	50,200	38,460	88,660
Eastern White Pine	4,060	4,060	8,120
Northern Red Oak	11,700		11,700
Pignut Hickory	24,950	1,850	26,800
Red Maple	2,160		2,160
Red Pine	20,530	9,320	29,850
Scarlet Oak	5,520		5,520
Shagbark Hickory	3,630		3,630
Sugar Maple	7,840	6,220	14,060
Sweetgum		1,110	1,110
White Ash	4,050		4,050
White Oak	60,660	15,510	76,170
Yellow Poplar	12,490	22,580	35,070
TRACT TOTALS	259,500	120,520	380,020
PER ACRE TOTALS	3,707	1,722	5,429

PREVIOUS CRUISE DATA				
DATE:	12/23/88	GROWING STOCK	HARVEST STOCK	TOTAL VOLUME
PER ACRE TOTALS		2,088	535	2,623

RESOURCE MANAGEMENT GUIDE
FORESTER'S NARRATIVE
Jackson-Washington State Forest
Compartment 09 Tract 20
Foresters: Brian Bailey and Michael Spalding
Date: August 9, 2007

Tract 20 is located ½ mile north of Clay Hill Hollow. More specifically, it is located in Sections 1 and 2 of T3N R4E and Sections 35 and 36 of T4N R4E, Monroe Township, Washington County. It contains 70 acres, predominately south and east facing slopes, predominately steep slopes with a southern aspect, descending into gentler topography along the stream bottom. The tract is bordered on the north, east, and south by the state, and on the west by private property. The bordering tracts are tract 12 on the north, tract 16 on the east, and tract 17 on the south.

Access to the tract is fair, although a long distance from Pulltight Road. From the intersection of Pulltight Road and Mail Route (Firetrail 710), travel approximately 3.75 miles to Firetrail 720. The tract is approximately 1.1 miles back Firetrail 720.

History

The creation of tract 20 resulted from two (2) larger purchases: 153 acres from Columbus P. Baskerville and Edith N. Baskerville on November 20th, 1959; 160 acres from Mary A. Vondielingen and John H. Vondielingen on January 26th, 1963.

A cruise of this tract in December 1971 and subsequent management plan stated the following about this tract:

Only 15 trees were tallies on the entire 104 acres as cut or leave trees. Most of the acreage is too poor to produce sawtimber and the land that is good enough is only supporting pole size trees. The beech-maple portion should be TSI'd to permit ingrowth of tulip. Three turkeys were observed during the cruise, thus the area might best be utilized for turkey management.

Tract 20 was created by dividing the original Tract 16 into two tracts. A 1988 management plan states that the tract was 127 acres. Currently Tract 16 is listed as 75 acres, and Tract 20 is listed as 70 acres. Maps from 1988 show the same land area; therefore, I attribute the difference in acreage to improvements in technology providing a more accurate estimate now.

A cruise and management plan for tract 16 was completed by forester John Friedrich on December 23, 1988. The cruise indicated approximately 2,624 bd. ft. per acre, with 535 bd. ft. available as harvest stock and 2,088 bd. ft. to be left as growing stock. This accounted for an estimated total tract volume of 333,220 bd. ft., with 68,001 bd. ft. available as harvest stock and 265,219 bd. ft. to be left as growing stock. Due to the low amount of harvest stock available and areas of smaller trees present, Friedrich recommended TSI. The TSI was not performed.

Soils

Burnside silt loam (Bu) occasionally flooded; well drained and bottom land is moderately well drained. Available water capacity and permeability is both moderate. Soil is well suited for trees while plant competition is moderate and seedlings do well if competing vegetation is controlled. Burnside silt loam has a yellow poplar site index of 95 and an eastern cottonwood site index of 105.

Berks-Weikert Complex (BhF) 25 to 75 percent slope; well drained soil on the upland side slopes. Both soils are very intermixed so they are mapped as one. Berks has a northern red oak site index of 70, Weikert has a northern red oak site index of 64, and both have black oak site index of 50. Gilpin silt loam (GID2)

Gilpin silt loam (GID2) 12 to 18 percent slope; eroded, is a moderately deep soil and well drained found on upland side slopes. Gilpin silt loam has a northern red oak site index of 80.

Wellston silt loam (WeC2) 6 to 12 percent slopes, eroded; is a deep, well drained upland soil. This soil type has a yellow-poplar site index of 90 and a northern red oak site index of 71.

Wellston silt loam (WeD) 12 to 18 percent slopes; is a deep, well drained soil found on side slopes adjacent to drainages. This soil type has a yellow-poplar site index of 90 and a northern red oak site index of 71.

Zanesville silt loam (ZaB) 1 to 6 percent slopes; is a deep, moderately well-drained to well drained soil. This soil type has a black oak site index of 75 and a yellow-poplar site index of 90.

Each soil type present will support harvesting equipment with certain locations being avoided due to topographical limitations. BhF is listed with severe equipment limitations due to slopes ranging up to 75 percent.

Wildlife

Wildlife present includes, but not restricted to, the following: white-tailed deer, wild turkey, gray and fox squirrels, chipmunks, raccoons, coyote, eastern box turtles, hawks, Pileated woodpecker, Wood thrush, Northern Cardinal, and other song birds. An improvement harvest in this tract should benefit both game and non-game species through the creation of additional foraging and nest habitat. Using both single tree and group selection provides habitat for early-, mid- and late-successional wildlife species.

Indiana Bat Management Guidelines

The following present values were determined from the inventory:

	Live trees:	Present	Goal	Available for Removal
Minimum	11" +dbh	1728*	634 *	1095
	20" +dbh	147*	212 *	-65

	Snags:	Present	Goal	
Minimum	5"+dbh	391	282	109
	9"+dbh	116	212	-96
	19"+dbh	16	36	-19

* The present and goal only include the following Desired Live Tree Species: AME, BIH, BLL, COT, GRA, REO, POO, REE, SHH, ZSH, SIM, SUM, WHA, WHO

Timber marking will generally favor retention of most of these tree species preferred by the Indiana bat and minimize their removal. Release of these species in the smaller size classes will promote an increased number of these trees into larger size classes; therefore, increasing the number of 20"DBH and larger to either meet or exceed the goal. The number of snags in both the 9"+ and 19"+ classes are below the goal; however, these numbers will be increased through cull removal during post-harvest TSI. The inventory indicated that there are approximately 599 culls in this tract.

The nature of improvement cuttings lends itself to the known Indiana bat habitat. Removal of single trees will permit light and crown space for the residual trees. This temporary opening in the forest canopy lends itself to ease in movement for bats during flight as they capture their prey. Trees opened up to increased sunlight are able to capture the increased warmth for bats under the exfoliating bark. Regeneration openings also provide pockets within the forest canopy for bats to obtain prey while in flight. It has also been discussed that bats frequently use skid roads and haul roads as flight paths in capturing food and travel routes.

Recreation

Recreational use of the entire area is minimal due to its distance from public parking access. Signs will be posted to educate the public about current management activities and list areas that are closed to public access. The tract will reopen once the timber harvest has been completed.

Tract Subdivision Units

Area 1 – Chestnut Oak

The basal area of this section is approximately 120 sq. ft. per acre. It is a dry chestnut oak site stretching along the ridge tops. The understory is predominately red maple, sassafras and greenbriar. Regeneration is plentiful with chestnut oak and black oak. The over-all quality is poor on this dry, thin soil, but the high stocking certainly justifies a harvest to thin this stand and to remove mature, damaged, and defective trees. Harvesting would take advantage of the good regeneration and allow an opening for the more vigorous regeneration to fill.

Area 2 – Oak-Hickory

The basal area of this section is approximately 100 sq. ft. per acre. The understory consists of dense sugar maple throughout much of this area. The overstory is comprised of pignut hickory, some shagbark hickory, white ash, white oak, red oak, chestnut oak, and black oak. There is a lot of white ash regenerating, along with American beech,

sugar maple, and sassafras - which all has grown into the understory in parts. The overstory needs a thinning harvest; however, a few areas might be inaccessible due to extremely steep slopes.

Area 3 – Black Oak-White Oak

The basal area of this section is approximately 140 sq. ft. per acre. This area is predominately black oak and white oak along the toe slopes of this tract. The health is good and the site looks very favorable for these species, but they are currently overstocked. To maximize the full potential of this area, a harvest needs to be performed in the near future to maintain the health and vigor of the best residual trees. Many pole sized white oak are present and have excellent potential if they are released before they become too suppressed.

Area 4 – Pine-Hardwood

The basal area of this section is approximately 140 sq. ft. per acre. It is part of the same pine plantation referenced in the management plan for Tract 16. The stand contains eastern white pine and according to the inventory, red pine (more likely shortleaf pine). My recommendation for this area is to remove all of the pine trees in the harvest. None of these species are native to this site, and their removal will allow this area to return to a stand of native hardwoods. In the case of areas where hardwoods are already established, removing the pine will provide release to allow the hardwoods to increase in growth and vigor. In areas where the pines completely occupy all of the growing space, their removal will allow regeneration of native hardwood species. Still in the bottom portion of this tract bordering the plantations are some mature yellow-poplar that should be harvested. The hardwood portions of this area should be harvested at the same time to remove mature trees and to thin the residual stand.

OVERALL

The inventory indicated approximately 5,429 bd. ft. per acre, with 1,722 bd. ft. available as harvest stock and 3,707 bd. ft. to be left as growing stock. This accounts for an estimated total tract volume of 380,020 bd. ft., with 120,520 bd. ft. available as harvest stock and 259,500 bd. ft. to be left as growing stock. The top three harvest species by volume are chestnut oak, yellow-poplar, and black oak.

The overall recommendation for this tract is to mark a harvest to remove competing, defective, and mature trees. This harvest should be combined with the adjacent tract 16. As mentioned earlier, the pine should be targeted for removal. This harvest should take place within the next five years. TSI after the harvest is recommended to release younger more vigorous crop trees not successfully released during the harvest and to complete any openings. The marking objective is to remove mature/over-mature stems, low quality stems and less desirable trees in an effort to improve the overall health, vigor and composition of the stand. The white oak should be favored in the benefit of improving the Indiana bat habitat, and should be allowed to grow into the largest DBH classes where our goals are currently deficient. The reduced stocking level throughout the tract will provide ample space for selected crop trees to increase or maintain growth and vigor. A healthier, more vigorous stand with good species composition will be less susceptible to insect and disease infestation a common

problem with unhealthy stands. These management techniques will improve the overall health, vigor and quality of the residual stand, while capitalizing on stems dropping out due to natural mortality from overstocking and maturity.

Wildlife will benefit from this harvest as well. Additional sunlight penetrating the forest floor will stimulate the development of new ground flora, subsequently increasing nesting and foraging habitat. This is essential for game and non-game species as well as continued forest development. TSI will increase snags while diversifying diameter distributions of both snags and growing stock trees.

DRAFT

TM 904

RESOURCE MANAGEMENT GUIDE

SPECIFIC PRACTICES FOR ACCOMPLISHMENT

(tree planting, TSI, harvest, special product sales, wildlife work, erosion control, unique areas, recreation, etc.)

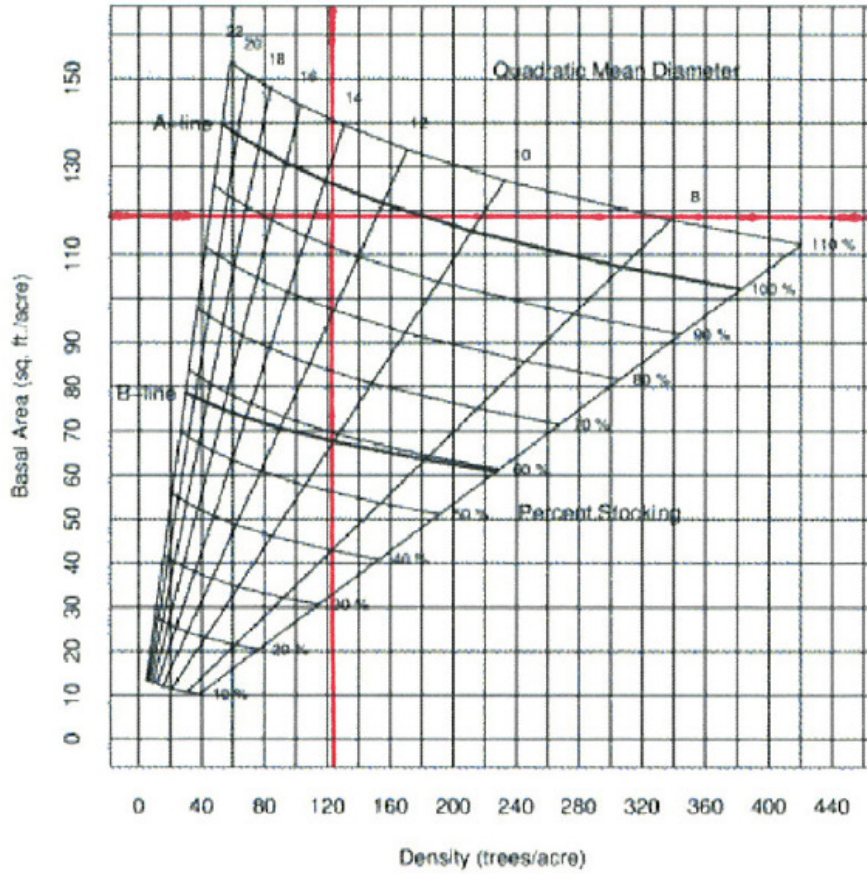
**Jackson-Washington State Forest
Compartment 09 Tract 20
Date: August 9, 2007**

Year Planned	Practice	Year Accomplished
Fiscal Year 2011	Mark and sell timber	
2013	Post harvest TSI	
2033	Inventory and Management Guide	

To submit a comment on this document, click on the following link:
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You **must** indicate “Jackson-Washington C9 T20” 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.

JWSF Resource Management Plan
 C 09 T 20 Tract Stocking
 July 2007 Inventory
 70 acres



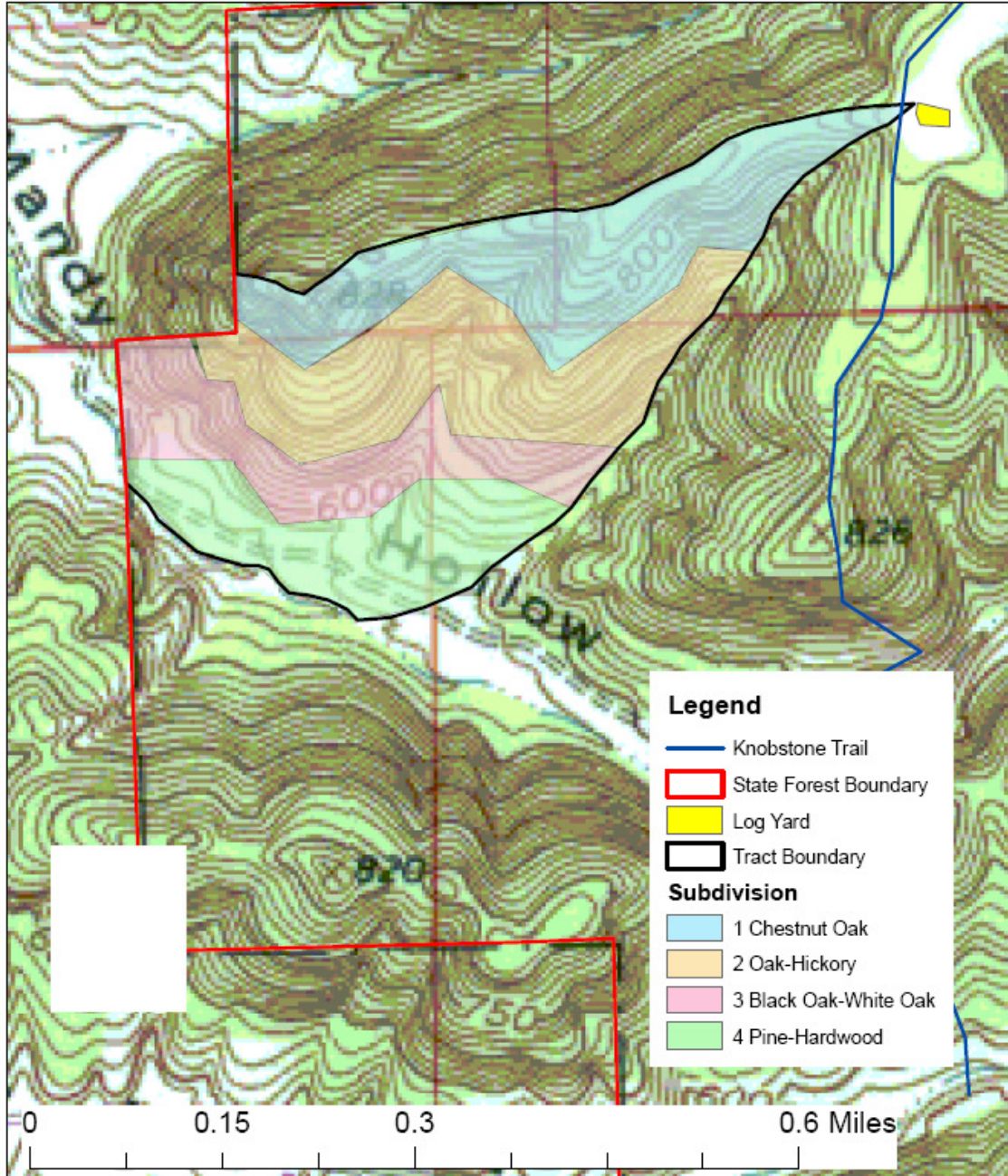
Total BA/A = 119.1 sq.ft./AC

Total #trees/acre = 128

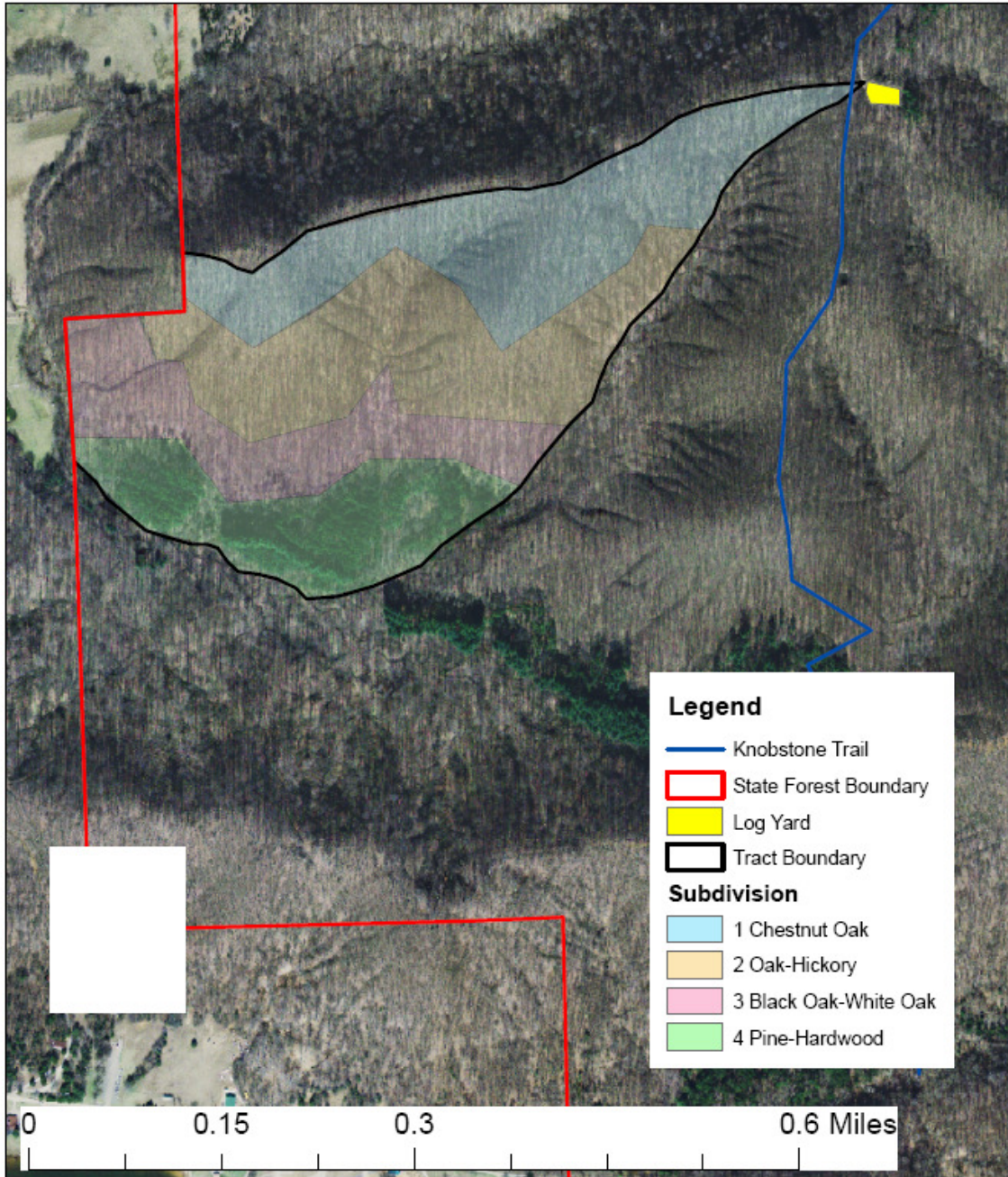
Avg. tree diameter = 13.5

Percent stocking = 95%

Jackson-Washington State Forest
Tract Subdivision Units
Compartment 9 Tract 20



Jackson-Washington State Forest
Tract Subdivision Units
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Jackson-Washington State Forest
Soils
Compartment 9 Tract 20

