TM 901 RESOURCE MANAGEMENT GUIDE				
INVENTORY SUMMARY				
			Compartment:	10
Jackson-Washington State Forest			Tract:	27
Forester:	Jacob Florine		Date:	July 21 2008

ACREAGE IN:				
	Commercial Forest	60	Average Site Index	68
			Avg. Annual Growth	127
			Total B.A./Acre	104.4
			B.A. Trees 6" & Up	98.3
			B.A. Trees < 6"	6.1
	TOTAL AREA	60		

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

SPECIES	HARVEST STOCK	GROWING STOCK	TOTAL VOLUME
American beech	3,110	11,930	15,040
American elm	1,390	0	1,390
American syscamore	2,420	0	2,420
black cherry	0	1,110	1,110
blackgum	1,660	2,390	4,050
black locust	0	3,950	3,950
black oak	2,310	30,390	32,700
chestnut oak	26,310	58,310	84,620
eastern white pine	6,880	18,780	25,660
Largetooth aspen	8,600	0	8,600
northern red oak	0	8,190	8,190
pignut hickory	4,060	28,510	32,570
red pine	0	7,410	7,410
shagbark hickory	0	15,210	15,210
sugar maple	9,720	33,230	42,950
white ash	790	5,510	6,300
white oak	5,540	20,600	26,140
yellow poplar	11,060	30,600	41,660
TRACT TOTALS	83,850	276,120	359,970
PER ACRE TOTALS	1,398	4,602	6,000

PREVIOUS CRUISE DATA				
DATE:	05/01/71	GROWING STOCK	HARVEST STOCK	TOTAL VOLUME
PER ACRE TOTALS		779	514	1,293

RESOURCE MANAGEMENT GUIDE
FORESTER'S NARRATIVE

Jackson-Washington State Forest
Compartment 10 Tract 27
Forester: Jacob Florine
Draft Date: July 17, 2008

Location
This tract is located in Washington County in the civil township of Monroe in Sections 13 and 14 of T3N R4E.

General Description
This tract has flat ridge tops along with fairly steep north, south, east and west facing slopes and is comprised of oak hickory, beech maple and mixed hardwoods cover types. The quality of these trees ranges from low to average quality.

History
Compartment 10 tract 27 is comprised of two separate land acquisitions. The first was part of a 210 acre purchase from Linza Graham Lumber Co., Inc. in 1963. The second was part of a 200 acre purchase from Evelene Nicholson in1996.
In May of 1971 an inventory was conducted and indicated 514 board feet per acre of harvestable timber with 779 board feet per acre leave. The inventory showed a total of 1,293 total board feet per acre. This inventory indicated only 30 acres of merchantable timber which is now 60 acres of merchantable timber. In December 2003 a survey was conducted in section 14 in this tract to locate corners and provide points along the line. In October 2005 pole sized cedar trees were sold to the adjacent landowner.

Landscape Context
The surrounding landscape is mostly forested with several watershed lakes. Topography varies from flat bottomlands to upland ridges. Agriculture fields dominate the flat ground. Development is minimal and mostly resulting from single family houses.

Topography, Geology and Hydrology
There are several steep slopes on this tract facing four cardinal directions. There are several ephemeral drainages as well as an intermittent stream flowing downstream and emptying into Delaney Creek. The soils are formed in material weathered from shale, siltstone, or sandstone.

Soils
There are five different soil types found in this tract.
Berks-Weikert complex, 25-75 percent slopes, (BhF) is well drained with bedrock at a depth between 10-14 inches. This soil type is commonly found on side slopes and uplands. Berks-Weikert complex has a black oak site index of 50 (34.24 acres).
Burnside silt loam, 0-2 percent slopes, occasionally flooded, (Bu) is moderately well drained with bedrock at a depth between 40-65 inches. This soil type is commonly found

on flood plains. Burnside silt loam has a yellow-poplar site index of 95 (1.09 acres).
Gilpin silt loam, 12-18 percent slope, eroded, (GlD2) is well drained with bedrock at a depth of 20-40 inches. This soil type is commonly found on side slopes and uplands. Gilpin silt loam has a northern red oak site index of 80 (4.59 acres).
Wellston silt loam, 6-12 percent slopes, eroded, (WeC2) is well drained with bedrock at a depth of 40-72 inches. This soil type is commonly found on uplands. Wellston silt loam has a northern red oak site index of 81 (8.54 acres).
Zanesville silt loam, 1-6 percent slopes, (ZaB) is moderately well drained with bedrock at a depth of 50-90 inches. This soil is commonly found on uplands. Zanesville silt loam has a black oak site index of 75 (11.25 acres).

Access
This tract is easily accessible. There is a 30 feet wide and 1,939 feet long easement off of Delaney Creek Road which leads to fire trail 730. Fire trail 730 leads up hill to the open field at the top of the ridge which continues on through the field and on to compartment 10 tract 27.

Wildlife
Several species of birds, reptiles and amphibians were seen and noted during this timber cruise. Multiple eastern box turtles were seen moving through the forest floor. There was also a green frog seen utilizing a puddle on an old skid road. A five feet long snake skin from either a black rat snake or a king snake was found near a small brush pile. There were numerous species of birds seen and heard throughout the tract. There are several snags and cavity trees which provide excellent shelter for numerous species as well as a food supply for woodpeckers.
The Natural Heritage Database Review does not indicate any threatened, endangered or rare species in this tract. However the hooded warbler (Wilsonia citrina) and the worm-eating warbler (Helmitheros vermivorus) were noted within a 2.5 mile matrix of this tract.

Indiana Bat Habitat Guidelines
The following present values were determined from the inventory:

Live trees:	**Present**	Goal	Available for Removal
11" +dbh	593*	540	53
20" +dbh	97*	180	-83

Snags:	**Present**	Goal	Available for Removal
9" +dbh	419	360	59
19" +dbh	44	60	-16

* The present and goal only include the following desired live tree species: AME, BIH, BLA, BLL, COT, GRA, REO, POO, REE, SAS, SHH, ZSH, SHO, SIM, WHA, WHO

The minimum count for both the 20" +dbh live-tree class and the 19" +dbh snag class are below the goal. TSI is a great way to increase the number of snags by deadening the cull trees and trees that could release crop trees. The live tree count could be increased by

harvesting less desirable species and minimizing the removal of desired species to allow for nutrients and sunlight to the smaller class of desirable species. This could speed the rate of growth to get the surplus of smaller diameter trees into the larger diameter size class.

Recreation
There is little recreation occurring on this tract. The main use seems to be hunting. The Knobstone Trail goes through this compartment but it does not go through this tract. Thirty-six of the 60 acres of this tract lie within the Back Country Area; therefore, harvesting in the Back Country Portion of this tract will be restricted to single tree selection only.

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.

Tract Subdivision Units – see attached map

Mixed Hardwoods
The basal area in the section is approximately 82.5 square feet per acre and covers approximately 18.53 acres. This basal area does not represent this section accurately due to an extremely low basal area in the north east part of the section. This plot only has 20 square feet of basal area. There is evidence that this spot was likely an old dump that has eroded badly and washed away most of the soil. The overstory species is mostly comprised of yellow-poplar, white ash, sugar maple, black locust, and American beech. The quality of these trees varies from low to poor. The understory species is similar to the overstory with less white ash and yellow-poplar and more sugar maple and American beech. The understory mostly consists of sugar maple and sassafras. There are a lot of grapevines hindering growth of the trees. These trees look as if they were once open grown. These poorest quality trees should be harvested to allow for better quality and more desirable trees to grow. Pre-harvest grapevine control could also be done to reduce competition of the younger trees.

White Pine
The basal area in this section is approximately 135 square feet per acre and covers approximately 1.75 acres. The high basal area indicates this section is overstocked. This pine was planted and could be harvested to allow for the native hardwoods to come up through the understory. The current understory is comprised mostly of sugar maple, yellow-poplar and sassafras. Grapevines are currently competing with the overstory trees for sunlight. Removing these grapevines could improve the quality of this section. Regeneration consists mostly of sugar maple, white ash, black oak and sassafras. The white pine should be harvested to encourage growth of the native hardwoods.

Oak-Hickory

The basal area in this section is approximately 134 square feet per acre and covers approximately 22.86 acres. This high basal area indicates that this area is overstocked and could benefit from a harvest. This section has average to good quality oak species such as white oak, chestnut oak and black oak as well shagbark hickory and pignut hickory. The size of these trees ranges from seedlings and saplings up to large sawtimber. Regeneration is good in most of this section. There are several large oak saplings competing with equal size saplings of less desirable species. These areas could greatly benefit from timber stand improvement (TSI). Removing this competition will allow for more nutrients and sunlight to reach these young oaks. Incorporating group openings where there is little oak regeneration may help to establish good quality oak. Group selection openings are not permitted in the portion of the tract that lies within the Back Country Area.

Beech-Maple
The basal area in this section is approximately 113 square feet per acre and covers approximately 16.61 acres. This is a high basal area and could be reduced by harvesting the mature and damaged trees to allow for the other better quality trees to continue growing. The quality of these trees is of an average quality comprised of mostly sugar maple and American beech in the overstory. The understory is thick with advanced regeneration sugar maple. There is a lot of fire damage on several of the large trees which should be harvested to make space for the understory to continue to grow.

Overall
The inventory done in July 2008 indicates that the tract has an approximate total of 6,030 board feet per acre with 1,430 board feet per acre available for harvest and 4,600 board feet to be left. The total harvest volume for this tract could be 85,820 board feet.

The recommendation for this tract would be to mark and harvest this tract within the next 5 years. This tract should be combined with Tracts 26 and 29. Single tree selection and group selection would be the best method of harvesting the mature and damaged hardwood timber. The area located within the Back Country Area will be restricted to single tree selection only. Post harvest TSI along with grapevine control should be performed to release the crop trees and improve the quality and rate of growth of the desirable species. The TSI can also help to get the desirable species into the larger size class for the Indiana bat. It can also create snags which to help reach our Indiana bat habitat goals.

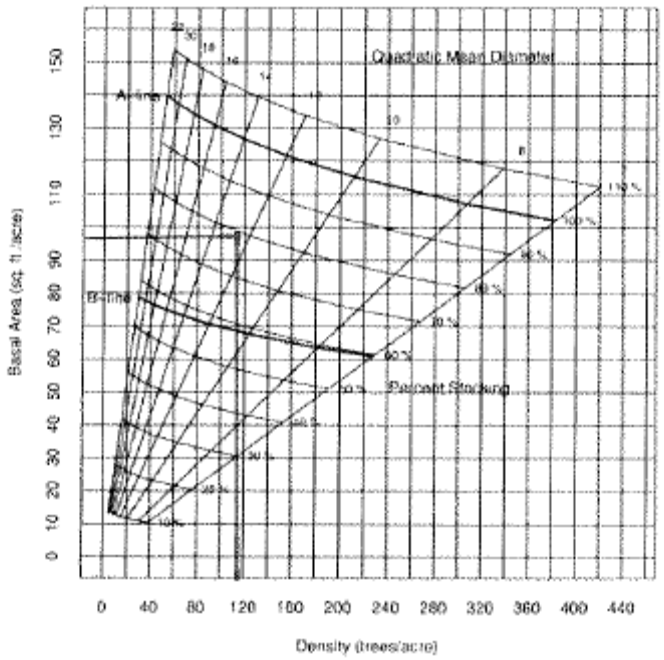
Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Mark and sell timber sale	2010
Post-Harvest TSI	2012
Inventory and Management Guide	2032

To submit a comment on this document, click on the following link:
http://www.in.gov/surveytool/public/survey.php?name=dnr_forestry

You **must** indicate "Jackson-Washington C10 T27" 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 10 T 27 Tract Stocking
July 2008 Inventory
60 acres

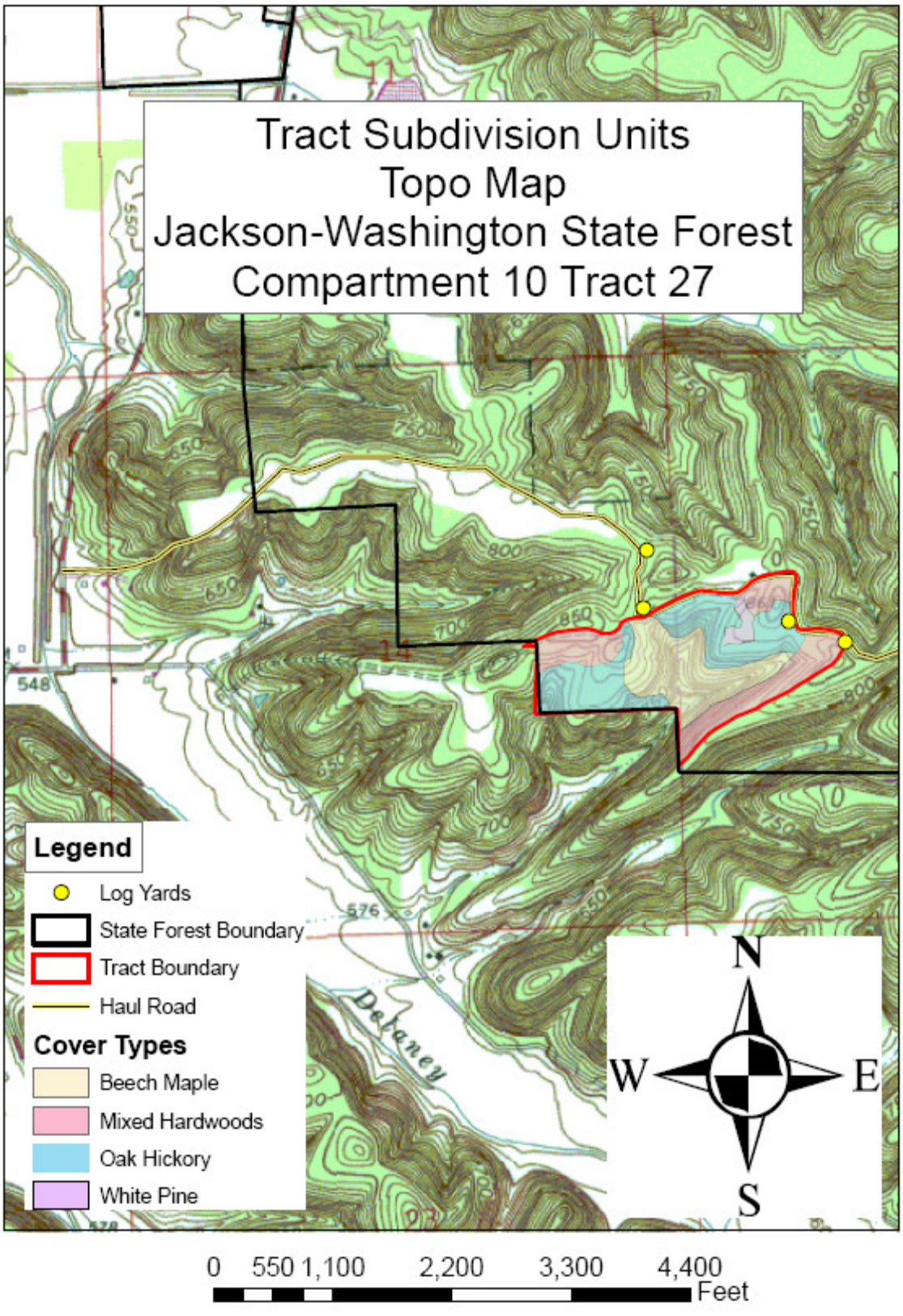


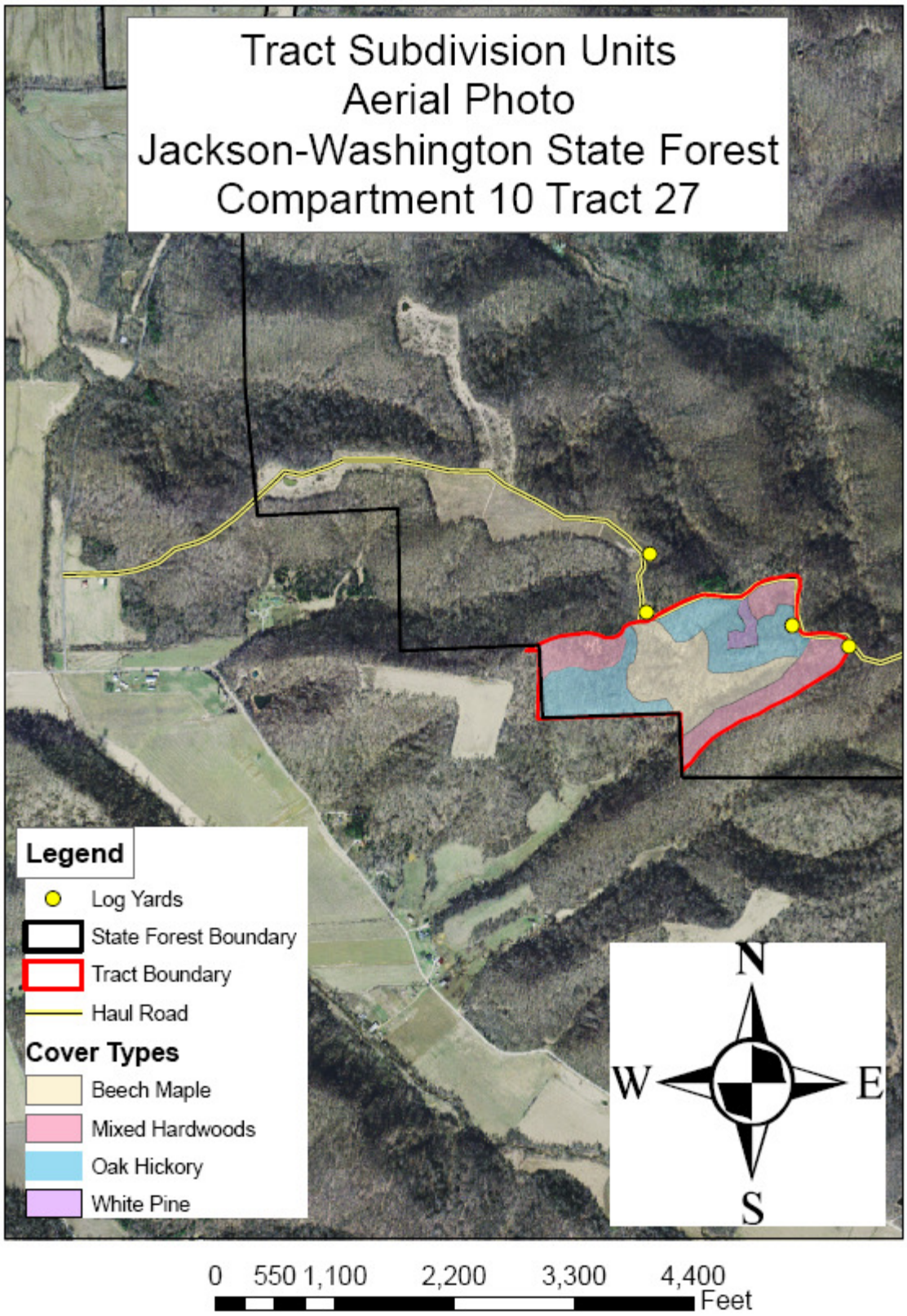
Total BA/A = 98.3 sq.ft./AC

Total #trees/acre = 114

Avg. tree diameter = 12.5

Percent stocking = 79%


Tract Subdivision Units
Topo Map
Jackson-Washington State Forest
Compartment 10 Tract 27
Legend
Log Yards
State Forest Boundary
Tract Boundary
Haul Road
Cover Types
Beech Maple
Mixed Hardwoods
Oak Hickory
White Pine
N
W
E
S
Delaney
548
576
0 550 1,100 2,200 3,300 4,400
Feet


Tract Subdivision Units
Aerial Photo
Jackson-Washington State Forest
Compartment 10 Tract 27
Legend
Log Yards
State Forest Boundary
Tract Boundary
Haul Road
Cover Types
Beech Maple
Mixed Hardwoods
Oak Hickory
White Pine
N
W
E
S
0 550 1,100 2,200 3,300 4,400
Feet

Soils Map
Jackson-Washington State Forest
Compartment 10 Tract 27