TM 901

RESOURCE MANAGEMENT GUIDE

INVENTORY SUMMARY

		Compartment:	10
Jackson-Washington State Forest		Tract:	26
Forester:	Jacob Florine	Date:	July 21 2008

ACREAGE IN:

Commercial Forest	61
TOTAL AREA	61

Average Site Index	85
Ave. Annual Growth	134
Total B.A./Acre	114.1
B.A. Trees 6" & Up	102.9
B.A. Trees < 6"	11.2

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

SPECIES	HARVEST STOCK	GROWING STOCK	TOTAL VOLUME
American beech	13,220	19,770	32,990
American elm	7,570	3,410	10,980
basswood	3,410	2,040	5,450
black cherry	0	3,610	3,610
blackgum	0	5,150	5,150
black locust	0	1,470	1,470
black oak	0	13,160	13,160
black walnut	0	1,850	1,850
chestnut oak	27,750	140,140	167,890
chinkapin oak	0	1,720	1,720
northern red oak	4,310	19,510	23,820
pignut hickory	0	22,500	22,500
red maple	2,720	4,010	6,730
sassafras	5,890	0	5,890
shagbark hickory	0	15,740	15,740
shingle oak	3,230	2,670	5,900
sugar maple	5,830	46,060	51,890
white ash	1,800	8,170	9,970
white oak	0	20,330	20,330
yellow poplar	3,620	7,260	10,880
TRACT TOTALS	79,350	338,570	417,920
PER ACRE TOTALS	1,301	5,550	6,851

PREVIOUS CRUISE DATA

DATE:	05/01/71	GROWING STOCK	HARVEST STOCK	TOTAL VOLUME
PER ACRE TOTALS		836	1,034	1,870

RESOURCE MANAGEMENT GUIDE
FORESTER'S NARRATIVE

Jackson-Washington State Forest
Compartment 10 Tract 26
Forester: Jacob Florine
Draft Date: July 18, 2008

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

General Description
This 61-acre tract has very steep north, south and west facing slopes and is comprised of mixed hardwoods, oak hickory and beech maple cover types. Quality of these trees ranges from low to high quality.

History
Compartment 10 Tract 26 is comprised of one land acquisition. This tract is part of a 210 acre purchase from Linza Graham Lumber Co., Inc. in 1963.
An inventory in 1971 indicated 1,034 board feet per acre of harvestable timber with a total volume of 1,870 board feet per acre. This inventory also indicated 52 acres of merchantable timber which is now 61 acres of merchantable timber.
A survey was done in the year 2003 to mark the property corners in Section 14 and points along the line.

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 in this tract facing three cardinal directions; north, south and west. There are several ephemeral drainages resulting from the steep slopes as well as an intermittent stream which flows downstream, eventually dumping into Delaney Creek.

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 10-40 inches. This soil type is commonly found on side slopes and uplands. Berks-Weikert has a black oak site index of 50 (37.54 acres).
Burnside silt loam, 0-2 percent slopes, occasionally flooded, (Bu) is moderately well drained with bedrock at a depth of 40-65 inches. This soil type is commonly found on flood plains. Burnside silt loam has a yellow-poplar site index of 95 (7.16 acres).

Gilpin silt loam, 12-18 percent slope, eroded, (GlD2) is well drained with bedrock at a depth of 20-40 inches. This soil is commonly found on side slopes and uplands. Gilpin silt loam has a northern red oak site index of 80.
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 (8.21 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 (6.17 acres).

Access
This tract has fairly good accessibility. 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 the hill to the open field at the top of the ridge. It then continues through the field and on to tract 26.

Wildlife
Several species of birds, mammals and reptiles were spotted while conducting the timber cruise. An eastern chipmunk was spotted in an area with a lot of down woody debris. An eastern box turtle was also seen crawling along an old skid road. Several birds were heard and seen while conducting the inventory. There are also a lot of greenbrier and blackberry bushes that provide food and shelter for several species. There is also an abundant source of mast producing trees on this tract.

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 (*Hemitheros vermivorus*) are both within a 2.5 mile matrix of this tract.

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

Live trees:	**Present**	Goal	Available for Removal
11" +dbh	639*	549*	90
20" +dbh	68*	183*	-115

Snags:	**Present**	Goal	Available for Removal
9" +dbh	238	366	-128
19" +dbh	43	61	-18

***** 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 both of the snag classes are below our goal. TSI is a great way to increase the number of snags by deadening the cull trees and trees that could release crop trees of the desired live tree species. The 20" +dbh 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 would 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 uses seem to be hunting and hiking. The Knobstone Trail goes through this compartment but it does not go through this tract. This tract is located within the Back Country area. Due to this designation, harvesting will be limited to single-tree selection only.

Cultural
There seems to be no evidence of home sites or any other significant archeological artifacts on this tract.

Tract Area Descriptions – see attached map

Mixed Hardwoods
The basal area in this section is approximately 101 square feet per acre and covers approximately 30.91 acres. The basal area varies greatly throughout this area. In some areas the basal area is as low as 40 square feet per acre and in other areas it is as high as 130 square feet per acre. The average basal area is high which indicates that this area is overstocked. The mixed hardwoods cover type is the most abundant cover type in this tract. The size of the trees in this section ranges from seedlings and saplings to large mature sawtimber. There are several high quality yellow-poplar growing in this section. Overall the quality of this area ranges from low to high. The understory in this area is mostly comprised of sugar maple and American beech along with several varying species. Regeneration varies depending on the amount of sunlight and the site conditions. In the areas with very low basal area, regeneration openings could be implemented to encourage younger trees and achieve a higher stocking; however, due to this tract's location within the backcountry area, harvesting will be restricted to single tree selection only. Grapevine control should also be implemented to maintain the growth and vigor of the trees.

Oak-Hickory
The basal area in this section is approximately 125 square feet per acre and covers approximately 20.43 acres. The high basal area suggests that a harvest could be done to reduce the stocking to speed the rate of growth. The trees in this area range from small pole size to large sawtimber size. The overstory is mostly average to good quality red oak, chestnut oak, white oak, shagbark hickory and pignut hickory. The understory in this area is thick with sugar maple and American beech. This thick understory puts a lot of shade on the forest floor which prevents other species to grow. An understory removal could be done as part of a post-harvest TSI operation to remove the shade and allow for more shade intolerant species to grow. This section should be managed to promote high quality oak and hickory trees and to maintain this forest type over time.

Beech-Maple
The basal area in this section is approximately 74 square feet per acre and covers approximately 9.7 acres. The trees in this section range from seedlings and sapling to large sawtimber. The overstory is comprised of mostly average quality American beech and sugar maple. A lot of the American beech have cavities or are hollow, which provides habitat for wildlife. The understory is comprised mostly of sugar maple and American beech as well. Regeneration is poor due to the steepness of the slopes and the thick understory canopy. Harvesting the mature and damaged trees in this section would be ideal however access to this section may be limited. Access is limited due to the steepness of the slope and because the neighboring property boundary runs along this same slope.

Overall
The inventory done in July 2008 indicates that the tract has an approximate total of 7,790 board feet per acre with 1,450 board feet per acre available for harvest and 6,340 board feet per acre as growing stock. The total harvest volume for this tract could be 88,390 board feet.

A general overall prescription for this tract would be to harvest the mature, damaged, and less desirable trees within the next five years. This sale should be combined with Tracts 27 and 29. This will make room for the more desired trees species and encourage better quality and better stocking. Due to the location of this tract in the Back Country Area, harvesting will be restricted to single-tree selection. Post harvest TSI along with understory removal, within one year of the harvest, will allow for more sunlight and nutrients to be available to the desired trees which will also provide better habitat for the Indiana bat. The TSI will deaden the less desired trees competing with the desired trees to maximize their growing potential and allow them to grow into the desired bat habitat size classes.

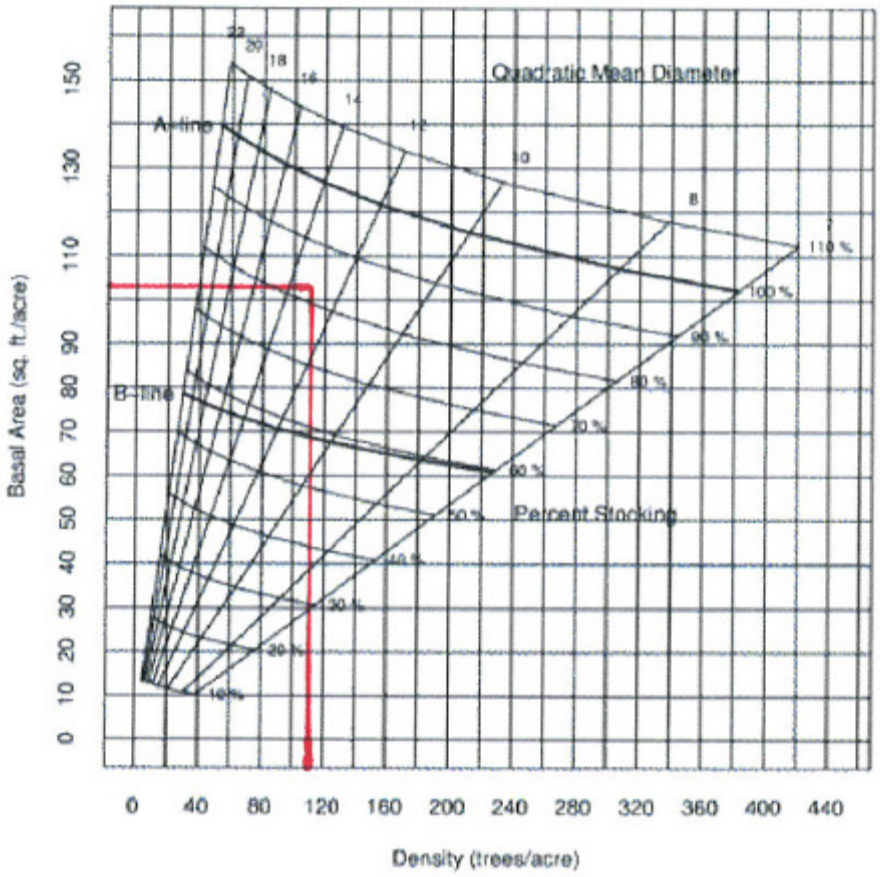
Proposed Activities Listing

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 T26" 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 26 Tract Stocking
July 2008 Inventory
61 acres

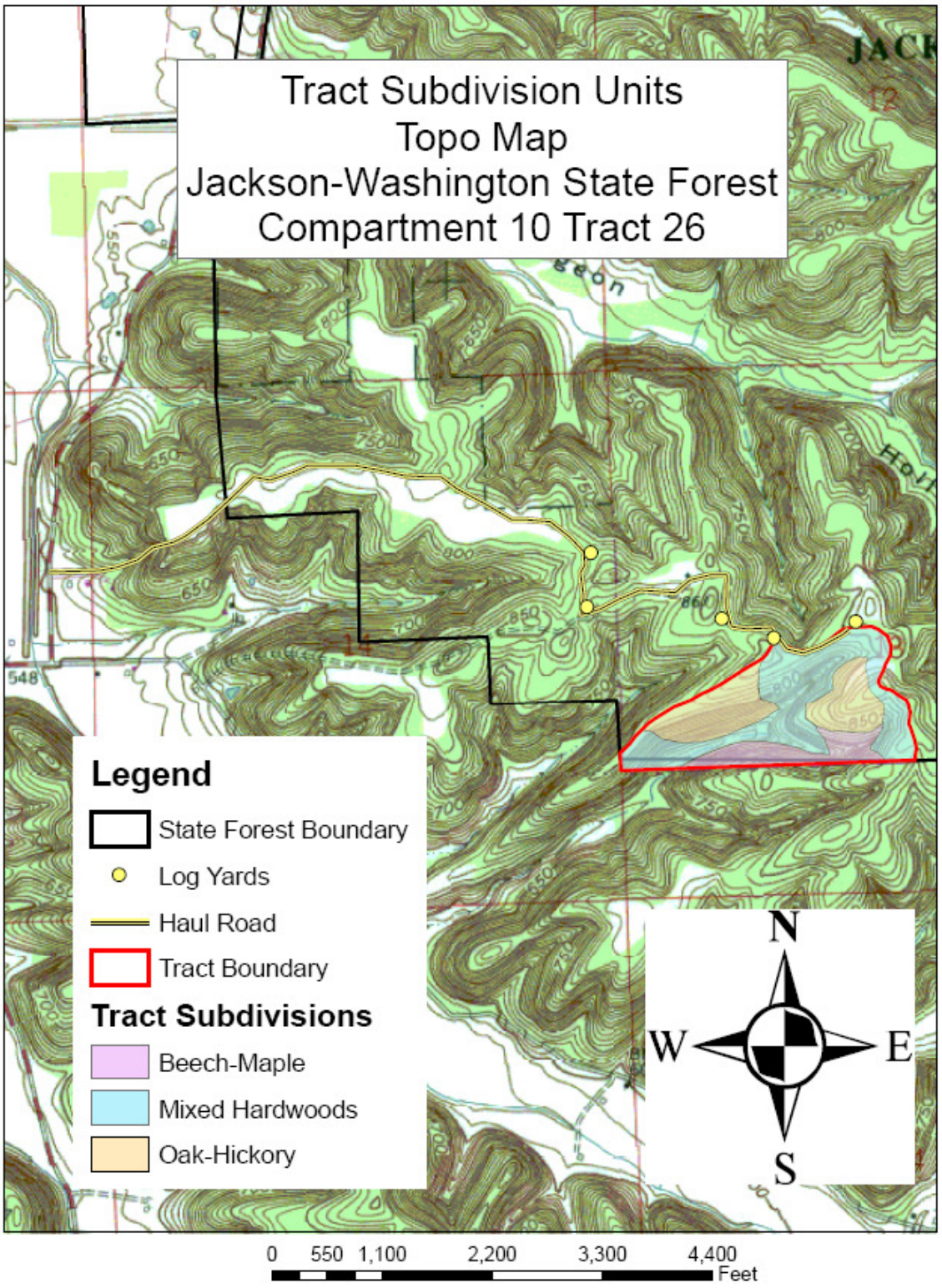


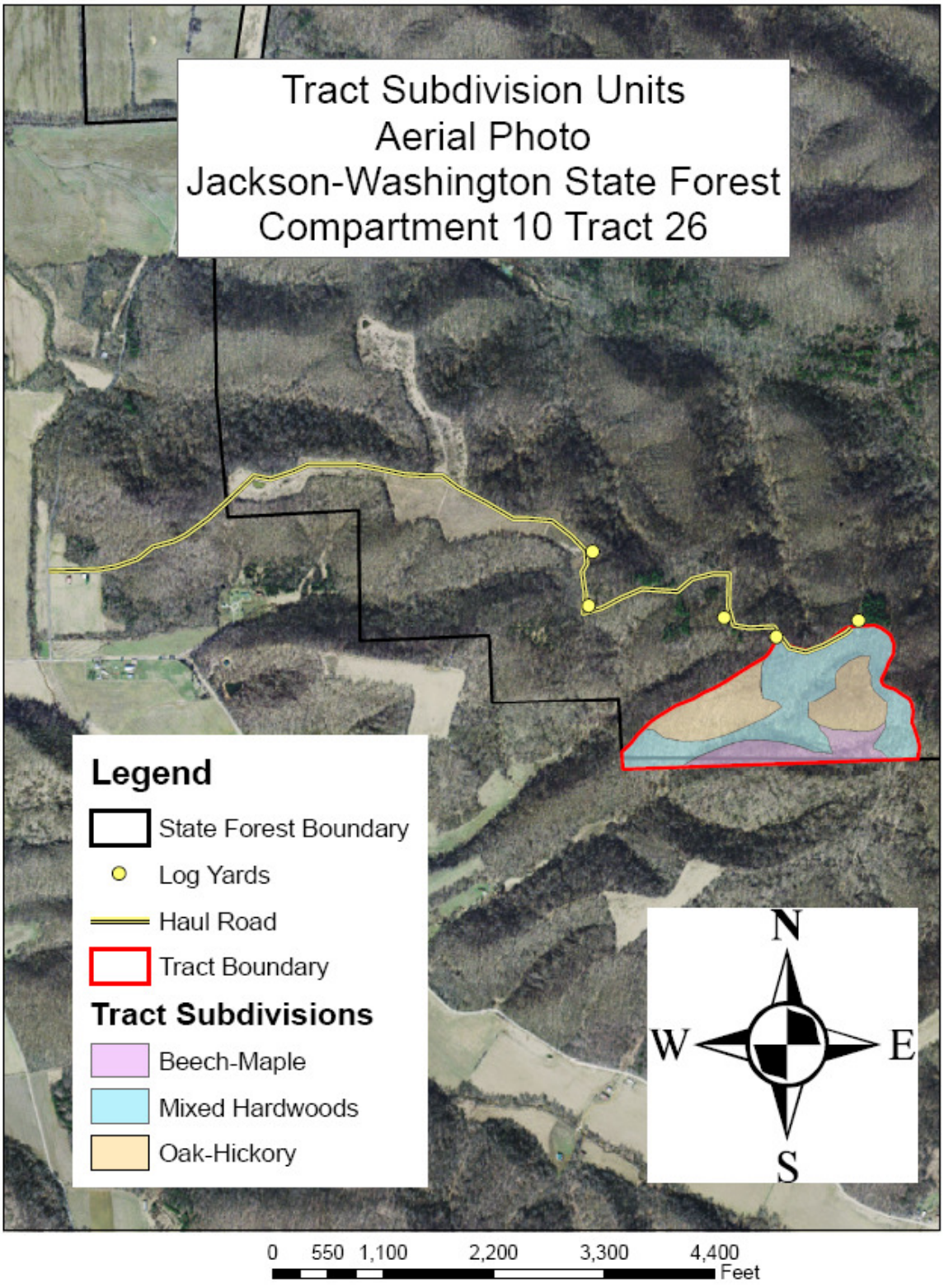
Total BA/A = 102.9 sq.ft./AC

Total #trees/acre = 115

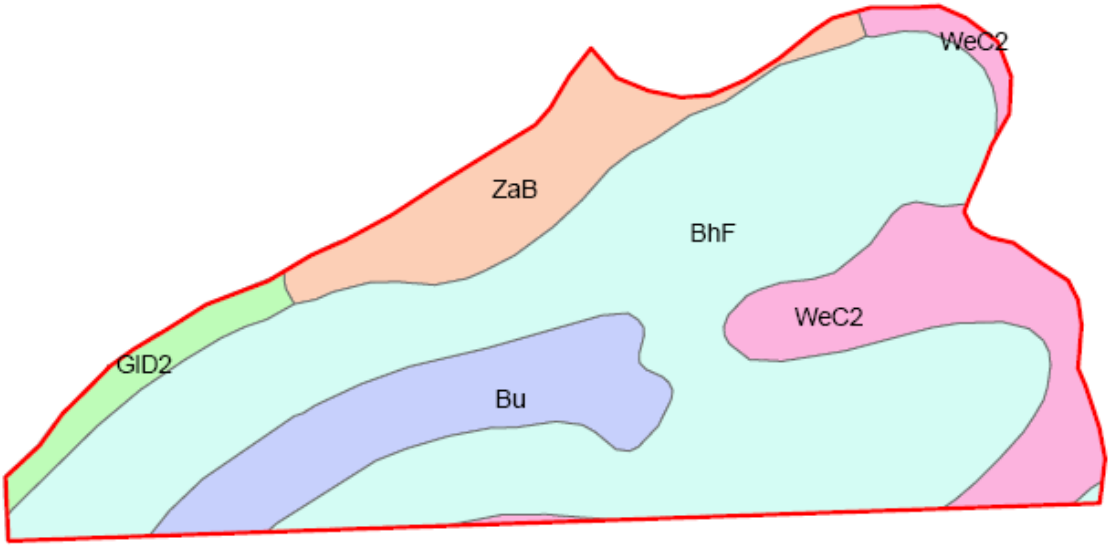
Avg. tree diameter = 13

Percent stocking = 83%


Tract Subdivision Units
Topo Map
Jackson-Washington State Forest
Compartment 10 Tract 26
Legend
State Forest Boundary
Log Yards
Haul Road
Tract Boundary
Tract Subdivisions
Beech-Maple
Mixed Hardwoods
Oak-Hickory
N
W
E
S
0 550 1,100 2,200 3,300 4,400
Feet


Tract Subdivision Units
Aerial Photo
Jackson-Washington State Forest
Compartment 10 Tract 26
Legend
State Forest Boundary
Log Yards
Haul Road
Tract Boundary
Tract Subdivisions
Beech-Maple
Mixed Hardwoods
Oak-Hickory
N
W
E
S
0 550 1,100 2,200 3,300 4,400
Feet

Soils Map
Jackson-Washington State Forest
Compartment 10 Tract 26



Legend

Tract Boundary

Soils6351026

- BhF
- Bu
- GlD2
- WeC2
- ZaB

N
W E
S

0 180 360 720 1,080 1,440
Feet