TM 901

RESOURCE MANAGEMENT GUIDE

INVENTORY SUMMARY

		Compartment:	10
Jackson-Washington State Forest		Tract:	41
Forester:	Scott Funk	Date:	9/2/09

ACREAGE IN:

Commercial Forest	52	Total B.A./Acre	120.3
Non-Commercial		B.A. Saplings	24.7
Recreation Use		B.A. Poles	25.7
Permanent Openings		B.A. Sawtimber	68.4
TOTAL AREA	52	B.A. Culls	1.5

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

SPECIES	HARVEST STOCK	GROWING STOCK	TOTAL VOLUME
American beech	13,420	11,790	25,210
American sycamore	0	4,660	4,660
American Elm	0	1,920	1,920
basswood	5,210	20,530	25,740
black cherry	0	1,680	1,680
blackgum	6,530	0	6,530
black oak	2,110	1,490	3,600
black walnut	0	1,630	1,630
chestnut oak	3,330	11,790	15,120
northern red oak	0	10,250	10,250
pignut hickory	3,830	2,790	6,620
red elm	0	2,040	2,040
red maple	0	1,800	1,800
sassafras	0	4,590	4,590
shagbark hickory	0	14,930	14,930
sugar maple	10,390	62,870	73,260
white ash	9,730	5,590	15,320
white oak	1,380	3,770	5,150
yellow-poplar	8,310	29,030	37,340
virginia pine	9,830	0	9,830
TRACT TOTALS	74,070	193,150	267,220
PER ACRE TOTALS	1,424	3,710	5,139

PREVIOUS CRUISE DATA

DATE:	May, 1971	GROWING STOCK	HARVEST STOCK	TOTAL VOLUME
PER ACRE TOTALS		1,237	1,568	2,805

RESOURCE MANAGEMENT GUIDE

Jackson-Washington State Forest — Compartment 10 Tract 41
Forester: Scott Funk — Date: 9/2/09
Management Cycle End Year 2034 — Management Cycle Length 25 years

Location

This tract is located in section 18&19 T3N R5E, Gibson Township, Washington County. This compartment is located approximately 8.5 miles North of Salem.

General Description

This 52 acre tract contains mixed hardwoods, beech-maple, and some young yellow-poplar stands. The entire tract is forested and lies on a north-facing slope.

History

Approximately 15 acres of this tract originated from a 120-acre land purchase from Thelma Fleenor on October 10, 1953. About 16 acres of this tract came from a 158.6-acre purchase from David and Manilla Maudlin on May 3, 1988 for $39,650.00. The most recent land acquisition in this area provided access to this tract and added an additional 21 acres to bring the total tract acreage to 52 acres. This land was from an 80-acre land purchase from Erman Hall on February 7, 1997 for $76,000.00. Prior to the State of Indiana purchasing the land, it received a heavy high-grade harvest.

This tract was originally known as Compartment 48 Tract 14A. It was later became part of Compartment 10 Tract 33 before again becoming its own tract, known as Compartment 10 Tract 41, on May 27, 2001.

The original 16-acre tract was cruised in May of 1971. The inventory estimated a total of 2,805 bd. ft. per acre with 1,237 bd. ft. as growing stock and 1,568 bd. ft. as harvest stock.

Forester David Pearson completed marking a timber sale on June 2, 1972. The sale contained approximately 11,780 board feet in 95 trees with sugar maple, American beech, and red oak as the top three harvest species by volume. The sale area covered the eastern 8 acres of the tract, giving an average harvest volume per acre of 1,473 bd. ft. The timber was sold on July 18, 1972 to Paul Wheeler of Vallonia for $401.00 ($34.04/MBF).

On December 12, 1989 loggers completed harvesting on the Maudlin property, which was done under deed reservation. Following the harvest, 29 trees were discovered to have been cut off of the state forest. On June 20, 1992, Consulting Forester Joe Schuerman completed 35 acres of TSI in this tract and the next tract to the north.

Landscape Context

The surrounding landscape is mostly state-owned forestland; the block of state forest that this tract lies within is approximately 6,000 acres. There is some scattered farm land with

pasture, crop fields, and old fields on near by private property. There are also several watershed lakes throughout the landscape. Development within the landscape consists of primarily single-family residences, with little increase in growth within the area.

Topography, Geology and Hydrology

The topography in the east to south east sections of tract is flat to steep ridges with slopes averaging from 35 to 59% with a max of 60%. The middle north portions of the tract average in slope from 5 to 40% with a max of 55%. The west section of the tract is very steep with slope averaging from 20 to 50% with a max of 80% in the far west gully. The elevations changes from 690 feet to its highest point at 860 feet. The underlying geology consists of shale and siltstone with some sandstone and limestone on the ridge tops. This entire tract flows into a mapped intermittent stream that flows southwest out of the tract into Delaney Creek, which flows into the Muscatatuck River.

Soils

Berks-Weikert Complex (BhF) (35.56 acres) 25 to 75 percent slope; well drained soil on the upland side slopes. Both soils are very much 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.

Burnside silt loam (Bu) (8.21 acres) 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.

Crider silt loam (CoB) (0.34 acres) 2 to 6 percent slopes, well drained with its most restrictive layer at a depth above 60 inches. This soil type is commonly found on uplands. Crider silt loam has a yellow-poplar site index of 98 and a black oak site index of 87.

Gilpin silt loam (GID2) (0.04 acres) 12 to 18 percent slope; eroded, it's 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) (7.57 acres) 6 to 12 percent slopes eroded, very deep well drained soil, depth of bedrock at 40 to 72 inches, moderate permeability. Upper is silt loam, next is silty clay loam, and the lower is channery loam.

Access

This tract can be accessed through a gate on Nicholson Hollow Road approximately ¼ mile from the intersection of Westpoint Church Road. Firetrail #730 begins at the gate and travels less than .1 mile to the corner of the tract. Firetrail #730 travels nearly 1 mile along the southern boundary of the tract.

Boundary
The eastern and western boundaries of the tract are private property lines. The southern boundary line follows Firetrail #730 on top of the ridge. The northern boundary line follows a mapped intermittent stream.

Wildlife

Wildlife Habitat Feature Tract Summary

	Maintenance Level	Optimal Level	Inventory	Available Above Maintenance	Available Above Optimal
Legacy Trees *					
11"+ DBH	468		1404	936	
20"+ DBH	156		143	-13	
Snags (All species)					
5"+ DBH	208	364	305	97	-59
9"+ DBH	156	312	152	-4	-160
19"+ DBH	26	52	7	-19	-45
Cavity Trees (All species)					
7"+ DBH	208	312	621	413	309
11"+ DBH	156	208	578	422	370
19"+ DBH	26	52	131	105	79

* Species Include: AME, BIH, BLL, COT, GRA, REO, POO, REE, SHH, ZSH, SIM, SUM, WHA, WHO

There are three habitat features estimated below maintenance level, the 9"+ DBH and 19"+ DBH snags, as well as the 20"+ DBH legacy trees. Post-harvest timber stand improvement (TSI) would create snags. Smaller legacy trees released during the harvest will grow more quickly into the larger size class than would trees not released by harvest. No wildlife was observed on this tract during inventory other than squirrels and chipmunks. The north bottom of part of the tract is dense thick cover and has a wide diversity of tree species mixed together.

Communities
This tract contains mixed hardwoods, beech-maple, and yellow-poplar forest types. Paw-paw is dominant in the understory throughout. Invasive species include siltgrass, multiflora rose, and a couple of ailanthus trees. If accessible, the stiltgrass should be treated during early summer prior to seeding. The ailanthus trees should be treated with Garlon in basal oil. The Natural Heritage Database review shows this tract as being mesic upland forest and reed bent grass within three tracts south of 1041.

Recreation
The primary recreational activity on this tract is hunting. Illegal ATV trails were discovered in this tract as well.

Cultural
There were no cultural sites found within this tract.

Tract Subdivision Description and Silvicultural Prescription

Beech Maple (9.93 acres)

Most of this area consists of American beech and sugar maple with a few hickories and yellow-poplar trees mixed in. The understory species consist mainly of sugar maple and American beech. Most of these areas contain of small, medium, and large sawtimber size trees. The proposed management for these areas is to harvest damaged trees, poor form trees, and mature trees. One area in the southeast corner of the tract is ready for a regeneration opening where the overstory had been previously high-graded. In the areas where there are several small to medium pole size trees, TSI will be performed to release the more vigorous crop trees. The average sawtimber basal area for the beech-maple forest type is 88 square feet per acre.

Mixed Hardwoods (12.40 acres)

Most of this area consists of American beech, American elm, American sycamore, basswood, black cherry, blackgum, black oak, black walnut, chestnut oak, northern red oak, pignut hickory, red elm, red maple, sassafras, shagbark hickory, sugar maple, Virginia pine, white ash, white oak, and yellow poplar. The understory species mainly consisted of American beech, sugar maple, hackberry, ironwood, and pawpaw. Most of this stand type consists of medium to large sawtimber with a few very large trees and even some quality white oak too. The proposed management for these areas is to harvest all the merchantable white ash, harvest damaged trees, some culls, and thin the remainder of the stand to release the good sawtimber size trees. The average sawtimber basal area for the mixed hardwoods forest type is 80 square feet per acre.

Yellow-Poplar (15.03 acres)

This stand type consists of yellow poplar and the understory species consists of yellow poplar. These areas mostly contained small to medium poles and a couple of sawtimber mixed within. The proposed management for these areas is to perform a thinning from below by removing the intermediate and suppressed yellow-poplar as well as a crown release thinning. This will release the other large diameter yellow-poplar for future growth. Due to their small size, this will be performed as TSI rather than harvesting. This is a young pure yellow poplar stand that will have high value one day. The average sawtimber basal area for the yellow polar forest type is 33 square feet per acre.

Summary Tract Silvicultural Prescription and Proposed Activities

The inventory concluded in the summer of 2009 estimates the 52 acres of commercial forest on this tract contains a total of 267,210 board feet of volume. Out of that amount, 74,060 board feet was estimated as harvest stock and 193,140 board feet was estimated as growing stock. On a per acre basis, the harvest stock is 1,420 board feet and the growing

stock is 3,710 board feet for a combined total of 5,140 board feet per acre. This harvest would reduce the stocking from 78% to 64% stocking. The overall proposed management for this tract is a selection harvest with at least one regeneration opening on the southeast corner of the tract. The harvest should focus on removing damaged, poorly-formed, and low quality trees to release more vigorous and healthier crop trees for future growth. Openings will be placed in areas containing primarily mature and/or damaged trees. From the previous harvest there was a 15 acre regeneration opening which came back as a pure yellow-polar stand. The trees are all currently pole-sized in this area. I recommended dong a thinning in this stand to release the future crop tree yellow-poplar. Following the harvest, timber stand improvement should be done to release any crop trees that did not get released during harvest, and complete any regeneration openings. There are three habitat features estimated below maintenance level, the 9"+ DBH and 19"+ DBH snags, as well as the 20"+ DBH legacy trees. Post-harvest timber stand improvement (TSI) would create snags. Smaller legacy trees released during the harvest will grow more quickly into the larger size class than would trees not released by harvest. In approximately 20 years following the harvest and timber stand improvement, another inventory will be done on the tract to see if another harvest is possible.

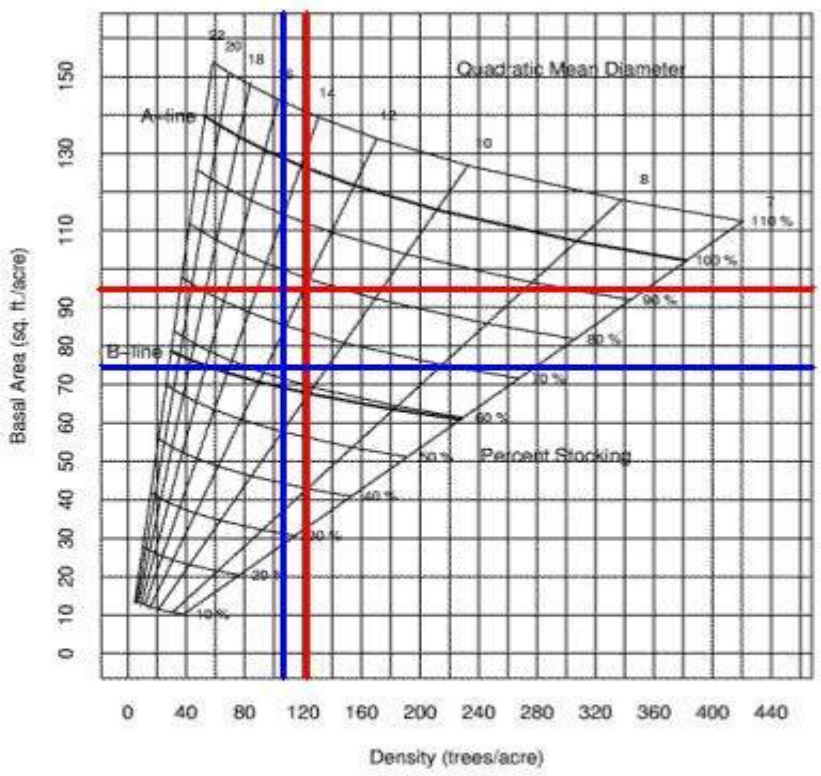
Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Mark harvest and sell timber	2010
Post-Harvest TSI	2012
Inventory and Management Guide	2034

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 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.

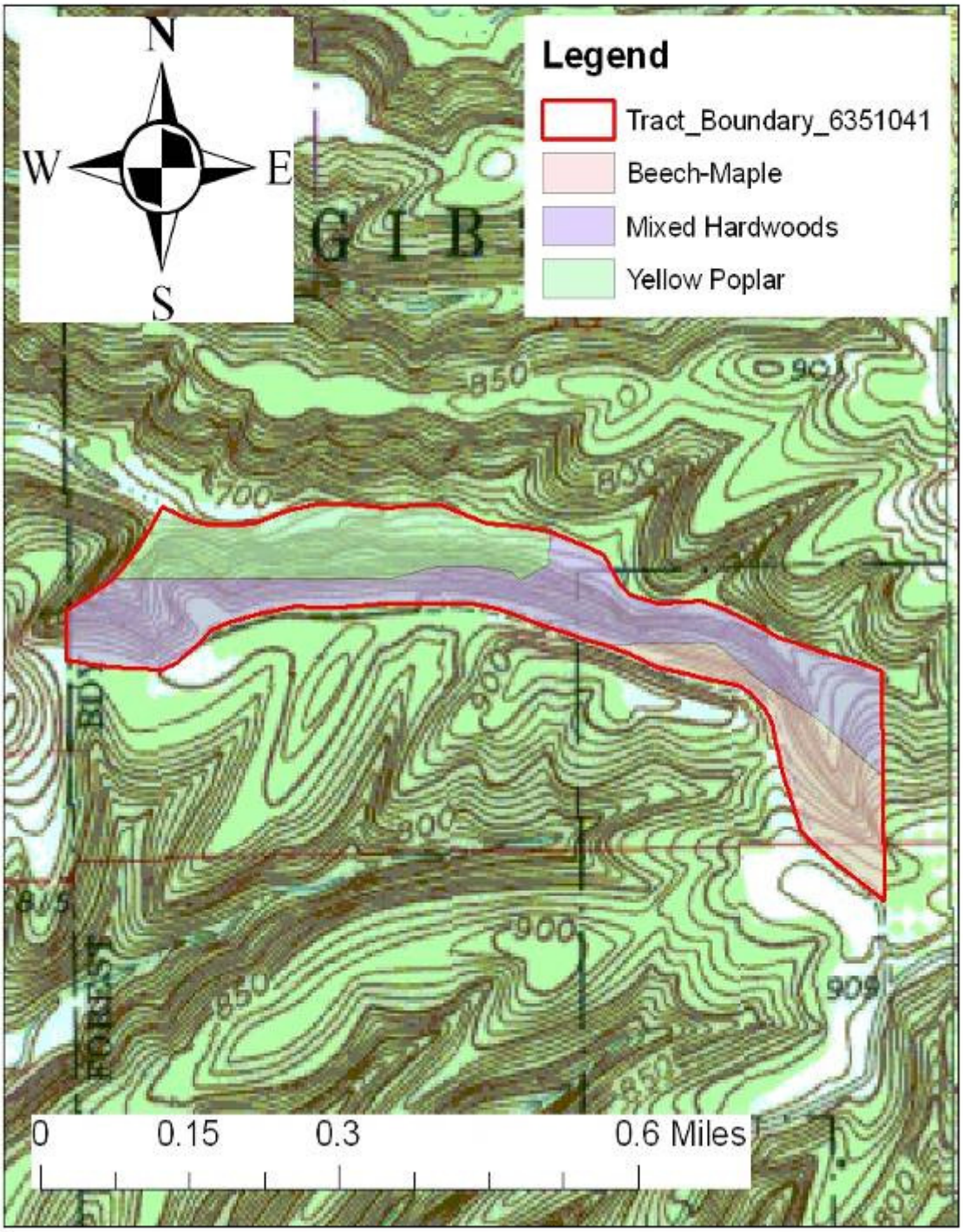
JWSF Resource Management Plan
Compartment 10 Tract 41 Stocking Guide
9/2/09 Inventory
52 acres



Pre-Harvest Inventory Data in Red
Total B.A. = 95.6 sq.ft.
Total # trees/acre = 121
Avg. tree diameter = 12" DBH
Percent stocking = 78%

Projected Post-Harvest Data in Blue
Total B.A. = 75.54 sq.ft.
Total # trees/acre = 106
Avg. tree diameter = 11" DBH
Percent stocking = 64%

Tract Subdivisions
Jackson-Washington State Forest
Compartment 10 Tract 41



Tract Subdivisions
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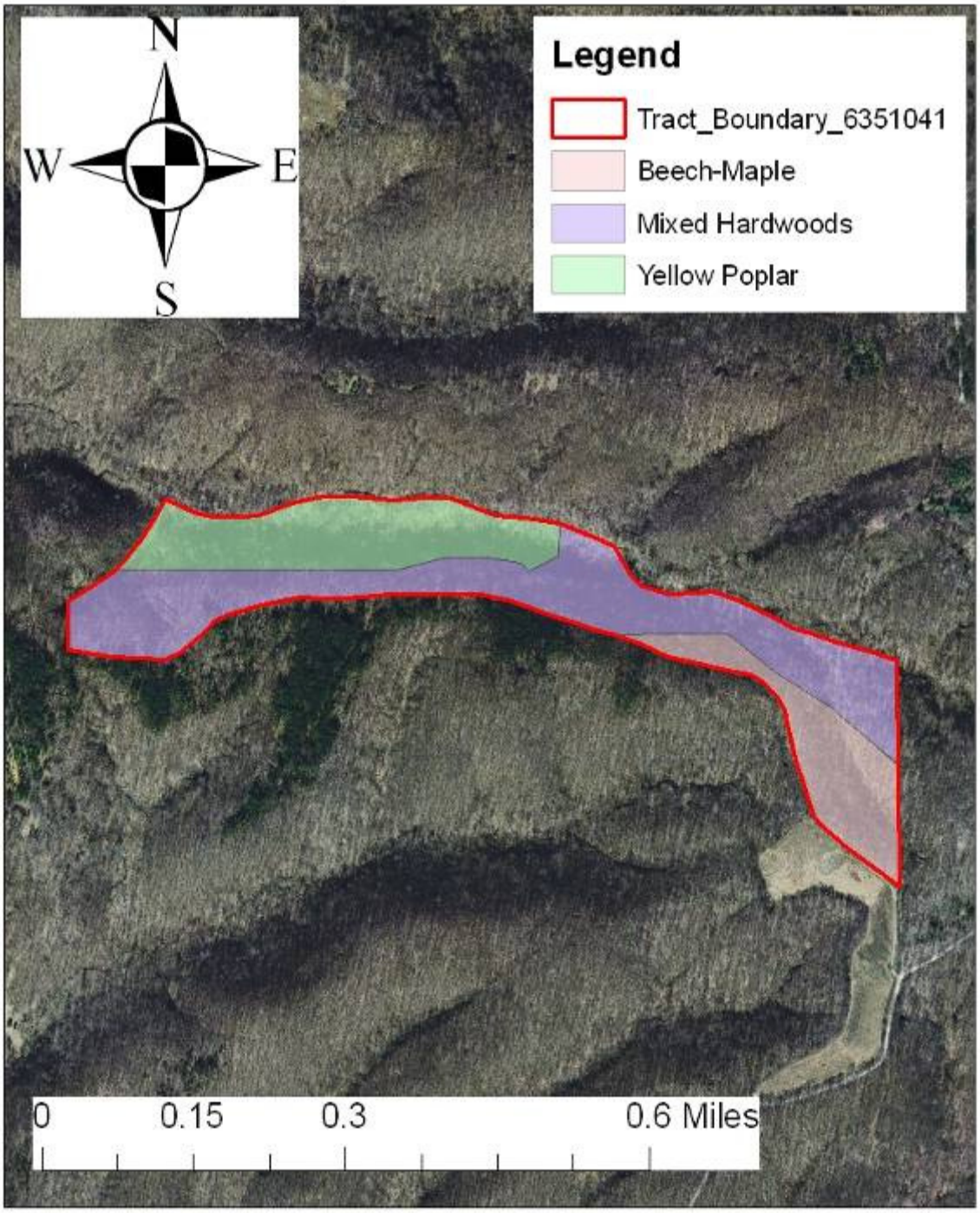

Soils Map
Jackson-Washington State Forest
Compartment 10 Tract 41