Indiana Department of Natural Resources
Division of Forestry
DRAFT

RESOURCE MANAGEMENT GUIDE

Jackson-Washington State Forest	Compartment 8 Tract 6, 16, 17
Forester Vogelpohl	Date 7/20/2010
Management Cycle End Year	Management Cycle Length

Location

This management area is located approximately eleven miles southeast of Vallonia, Indiana. More specifically sections 10 and 15 of Monroe Township, Township 3N and Range 4E. The area is more commonly referred to as Compartment 08 Tracts 06, 16 and 17 of Jackson-Washington State Forest.

General Description

This management area is approximately 140 acres. The general cover type is hardwood forest. This area does contain a small section of Plattsburg pond to the north.

History

The management area is comprised of three purchases. The first was in 1964 containing 312 acres from Murrell F. Dorsey and Jaunita Dorsey. The second was a 30 acre parcel from Joseph B. Stout and Rose Anna Stout in 1964. The final parcel to contribute to this tract was a purchase in 1996 from Dennis Wischmeier and Wanda Wischmeier and Brian Wischmeier totaling 80 acres.

In 1974 a portion of this area (what is now C08 T06) was compartment 44 tract 4 with approximately 30 acres. Comments in a report from a cruise in that year said previous owners "cut off all the timber that was worth cutting." This cruise found 822 bf/ac of harvestable timber and a total of 2,034 bf/ac across the tract. The timber was described as lower quality oaks, hickory, and beech.

In 1988 a portion of this area (what is now C08 T06) was compartment 8 tract 5 and contained 29 acres. A cruise in 1988 by Johnson found 1,500 bf/ac of harvestable timber with a total of 4,298 bf/ac on that 29 acre parcel. He suggested TSI because of the small diameters.

In 1988 a portion of this area (what is now C08 T06) was compartment 8 tract 6 and contained 22 acres. The inventory report indicates that 123 bf/ac of harvestable timber with a total of 4,119 bf/ac was present. The management recommendation was for TSI, due to low harvest volume.

Compartment 08 tracts 16 and 17 were created in 1997 due to land acquisition from Wischmeier. The only information in the tract history folders for either tract 16 or 17 is a 2010 inventory.

Landscape Context

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

Topography, Geology and Hydrology
This area is comprised of two main ridges that, from the topographic map, look like the "<" symbol. These two ridges come off of a main east-west ridge from the west. The hydrology within the area includes one mapped perennial stream that flows east into Plattsburg pond and a small portion of a perennial stream near the southeast property corner in section 10. Soils in this area generally were formed in material weathered from shale, siltstone, sandstone, clayey till, loess or acidic silty alluvium.

Soils

Berks-Weikert complex (BhF) (91 acres) This soil series is steep to very steep, well drained soils are on side slopes in the upland areas. The Berks soil is moderately deep, and the Weikert soil is shallow. They are about 55% Berks soil and 35% Weikert soil. The two soils occur as areas so intricately mixed that mapping them separately is not practical. This soil complex is suited for trees. The erosion hazard, the equipment limitations, seedling mortality, windthrow hazard, and plant competition are concerns in managing the woods. Locating logging roads, skid trails, and landings on gentle grades and removing water with water bars, culverts, and drop structures help to control erosion. The site index for hardwood species range from 50 (black oak) to 70 (white oak). Preferred trees to manage for are black oak, chestnut oak, scarlet oak, red oak, and white oak.

Burnside silt loam (Bu) (11 acres) This series consists of deep, well drained soils that formed in 30 to 61 centimeters (12 to 24 inches) of medium-textured alluvium and the underlying loamy-skeletal alluvium. These soils are on flood plains and alluvial fans. It is occasionally flooded for brief periods in the spring. Native vegetation is deciduous hardwoods. This soil is well suited for trees. Plant competition is moderate. Seedlings survive and grow well if competing vegetation is controlled by cutting, girdling, or spraying. The site index for hardwood species is 95 for yellow-poplar. Preferred trees to manage for are bitternut hickory, white oak, red oak, black walnut, sugar maple, and yellow-poplar.

Cuba silt loam (Cu and Cw) (1.3 acre) This series consists of very deep, well drained soils that formed in acid, silty alluvium. These soils are on flood plains, flood-plain steps and natural levees. Slope ranges from 0 to 3 percent. Native vegetation is mixed hardwood forest. This soil is well suited to trees. No major hazards or limitations affect planting or harvesting. The site indexes for hardwood species is 100 (yellow-poplar). Preferred trees to manage for are bitternut hickory, white oak, red oak, black walnut, sugar maple, and yellow-poplar.

Pekin silt loam (PeA, PeB, PeC2) (.07 acre) This soil consists of moderately well drained soils formed in silty alluvium that can have a loess mantle of up to 102 cm (40 inches). They are very deep soils that are moderately deep or shallow to a fragipan. Pekin soils are on stream terraces and on flood-plain steps. Slopes range from 0 to 12 percent. Most areas of this soil are being used to grow corn, soybeans, and small grain, mainly wheat. A few areas are used for hay and pasture or are in forest. Native vegetation is mixed hardwood forest. This soil is well suited to trees. No major hazards or limitations affect planting or harvesting trees. The site indexes for hardwood species range from 70

(white oak) to 85 (yellow-poplar). Preferred trees to manage for are bur oak, chinkapin oak, hickories, red oak, white ash, and white oak.

Water (W) (4.4 acres) Plattsburg pond in the north of this management area.

Wellston silt loam (WeC2, WeD) (18 acres) This series consists of deep or very deep, well-drained soils formed in silty material from loess and from fine-grained sandstone or siltstone and with bedrock at depths of 40 to 72 inches. Wellston soils are on nearly level to steep uplands in areas of acid sandstone, siltstone, or shale bedrock; but are most common on ridgetops. Slope ranges from 0 to 50 percent but are dominantly 4 to 18 percent. Native vegetation consisted of oak, hickory, dogwood, tulip poplar, and cherry. This soil is fairly well suited to trees. The erosion hazard, the equipment limitations, and plant competition are the main concerns in the management of wooded areas. Locating logging roads, skid trails, and landings on gentle grades and removing water with water bars, culverts, and drop structures help to control erosion. During wet periods, roads tend to be slippery and ruts form easily. Seedlings survive and grow well if competing vegetation is controlled. The site indexes for hardwood species is 81 (red oak) and 90 (yellow-poplar). Preferred trees to manage for are black oak, chestnut oak, persimmon, red oak, scarlet oak, shagbark hickory, sugar maple, yellow-poplar, and white oak.

Zanesville silt loam (ZaB, ZaC2) (15acres) This gently sloping, deep, moderately well-drained or well-drained soil is found on ridge tops on the uplands. The soil is well suited to trees. Plant competition is moderate. Seedlings survive and grow well if competing vegetation is controlled by cutting, girdling, or spraying. The site index for this soil ranges from 70 (white oak) to 90 (yellow-poplar). Preferred trees to manage for are black oak, bur oak, chestnut oak, persimmon, scarlet oak, red oak, and white oak.

Access
Access to this area is very good. This area can be accessed from State Road 135. The Shipley Purchase parking lot, which is off of SR 135 just south of Plattsburg, is the beginning of the haul road which accesses this tract. The haul road was recently used for a timber sale in compartment 08 tracts 07 & 09 and is in good condition to the eastern log yard. From that log yard the haul road continues east and is in fair condition.

Boundary
At the western boundary of the area follow the drainage north to Plattsburg pond and then east to the northern property boundary. From the northern boundary continue east to the north-east property corner. From the corner the boundary follows the property boundary south for .25 mile to the south-east property corner. The line then heads due west for approximately .25 mile to another property corner. From that corner the line follows a path .70mile to the southern area boundary, which lies in an unmapped intermittent drainage. The area boundary follows the drainage north-north-west to the point of origin.

Wildlife

Wildlife Habitat Feature Tract Summary

	Maintenance Level	Optimal level	Inventory	Available Above Maintenance	Available Above Optimal
Legacy Trees *					
11"+ DBH	1260		3807	2547	
20"+ DBH	420		496	76	
Snags (all species)					
5"+ DBH	560	980	722	162	-258
9"+ DBH	420	840	253	-167	-587
19"+ DBH	70	140	62	-8	-78

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

The 5" DBH class is above the maintenance level, for snags. Both the 9" and 19" DBH classes are below the maintenance level, for snags. To make up for these deficiencies, trees within these DBH classes will be deadened during timber stand improvement activities to create additional snags to meet the maintenance levels for snags. The number of legacy trees for all diameter classes is above the maintenance level.

A Natural Heritage Database review was obtained for this tract. If rare, threatened or endangered species were identified for this area, the activities prescribed in this guide will be conducted in a manner that will not threaten the viability of those species.

Communities

Ailanthus, Japanese stilt grass, and Japanese honeysuckle were all found within the tract. Attempts to control the spread of Japanese stilt grass should occur in summer before the grass produces seed. Japanese honeysuckle should be monitored to ensure its spread is minimal. Ailanthus should be cut and treated with a basal oil and triclopyr where it is found.

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Forest Condition

The 2010 inventory states that the area contains a total volume of 6,319 bd. ft. per acre, with a harvest of 1,821 bd. ft. per acre and leaving a growing stock of 4,498 bd. ft. per acre. The measured basal for this area is currently 95.9 sq. ft. per acre (excluding sub-merchantable trees). According to the inventory, the post harvest basal area per acre (excluding sub merchantable trees) will be 68.5 sq. ft. This will reduce the stocking from 78% pre-harvest to 60% post harvest.

Recreation

There are no recreational facilities in this tract. Users are primarily hunters and wildlife viewers. Many typical game species can be found here including white-tail deer, turkey, rabbits, squirrels, etc…. There is a proposed extension of the Knobstone trail which would enter this area in the north east corner. This extension is pending due to details regarding the construction of a bridge.

Cultural
Cultural resources may be present on this tract but their location is protected. Adverse impacts to significant cultural resources will be avoided during any management or construction activities.

TM 901 RESOURCE MANAGEMENT GUIDE			
INVENTORY SUMMARY			
		Compartment:	8
Jackson-Washington State Forest		Tracts:	6, 16, 17
Forester:	Jason Vogelpohl	Date:	7/20/2010

ACREAGE IN:			
Commercial Forest	136		
Non-Forest	4		
TOTAL AREA	140		
		Total B.A./Acre	95.9

	GROWING STOCK (BF)	HARVEST STOCK (BF)	TOTAL VOLUME (BF)
Sugar maple	181,440	78,780	260,220
Chestnut oak	122,760	40,330	163,080
American beech	46,880	28,780	75,660
White oak	50,000	24,280	74,290
Yellow-poplar	49,400	9,210	58,610
Pignut hickory	44,850	2,440	47,290
Black oak	31,520	3,660	35,180
Shagbark hickory	22,870	4,670	27,540
American Sycamore	17,050	8,650	25,700
White ash	0	25,040	25,040
Red maple	16,610	3,610	20,220
Northern red oak	15,460	4,390	19,850
Bitternut hickory	13,180	4,600	17,790
Blackgum	5,100	6,820	11,920
Chinkapin oak	7,190	0	7,190
Black cherry	0	4,520	4,520
Black walnut	2,830	0	2,830
Other hardwoods	0	2,830	2,830
Red elm	0	2,260	2,260
Hackberry	1,570	0	1,570
Sassafras	1,050	0	1,050
TRACT TOTALS	**629,760**	**254,870**	**884,640**
PER ACRE TOTALS	**4,498**	**1,821**	**6,319**

1988 CRUISE TOTAL	2,798	1,500	4,298
1974 CRUISE TOTAL	1,212	822	2,034

Tract Subdivision Description and Prescription

Open Water (4 acres)

Plattsburg pond on the north side of this tract could be affected by the management on the tract. Any impact will be minimized by following Indiana's BMP guidelines. Management activity around this area should be monitored for its impact on the pond.

Bottomland Hardwoods (5 acres)

This subdivision lies in the north-central area of the tract near Plattsburg pong and a perennial stream. Much of this area is flat or gently-sloped with a northwest aspect. The overstory species in this area consist mainly of American beech, American sycamore, bitternut hickory, hackberry, sugar maple, white ash, and white oak. The sawtimber basal area is approximately 100 square feet per acre. The understory consists of American beech, sugar maple, and paw-paw. There is very little regeneration across this subdivision. Many of the damaged trees should be harvested to improve the quality of the stand. Also, any crop trees should be released and grapevines should be removed from them in order to improve their growth rate.

Mixed Hardwoods (102 acres)

The mixed hardwoods subdivision covers almost three-quarters of the tract. Much of this subdivision has a large amount of sugar maple. Other overstory species include: American beech, black gum, black oak, chestnut oak, northern red oak, pignut hickory, red maple, shagbark hickory, white ash, white oak, and yellow poplar. The average sawtimber basal area is 74 square feet per acre. The understory and regeneration is dominated by sugar maple, American beech, sassafras and red maple. The damaged and declining overstory trees should be removed and thinning should be done as needed. This will open up growing space for the healthier trees. White ash should be removed due to the threat of emerald ash borer.

Oak-Hickory (29 acres)

This area has an overstory of white oak, pignut hickory, black oak, chestnut oak, red oak, shagbark hickory, and bitternut hickory. This area also contains chinkapin oak which is more commonly found on limestone soils. Efforts should be made to retain chinkapin oak within the stand, where feasible. The average basal area of sawtimber is approximately 85 square feet per acre. The majority of the understory is American beech and sugar maple. Regeneration mostly consists of sugar maple, red maple, American beech and white ash. The basal area for sawtimber suggests the overstory should be thinned. To achieve this, damaged trees should be removed and quality trees should be released by removing competition to increase vigor within the stand.

Tract Prescription and Proposed Activities

The overall proposed management for this tract is to conduct an improvement harvest. Single-tree selection will focus on removing overmature, damaged, low quality, poorly-

formed, and mature trees. Regeneration openings are recommended in areas where the stocking is low or the trees are severely damaged or declining. Also, regeneration openings are recommended where early successional habitat is lacking and is needed. This will create stands of healthy growing hardwoods within the tract. Based on the summer 2010 inventory data, an estimated total volume 884,640 bd. ft. is present and 254,870 bd. ft. will be harvested from the management area. This will leave an estimated 629,760 bd. ft. growing stock. This translates to volume of 6,319 bd. ft. per acre, with a harvest of 1,821 bd. ft. per acre and leaving a growing stock of 4,498 bd. ft. per acre. Following the harvest, timber stand improvement (TSI) should be performed to release crop trees that did not get released during the harvest, to complete any regeneration openings, and to remove midstory or understory species where there is high potential for oak regeneration. Smaller diameter trees that are left as residual crop trees will grow into the larger size class more quickly after being released by a harvest and post-harvest TSI. Post-harvest TSI will create additional snags, which will help to meet the maintenance level for 9" + and 19"+ snags. In approximately 20 years following the harvest and timber stand improvement, another inventory will be done on the tract.

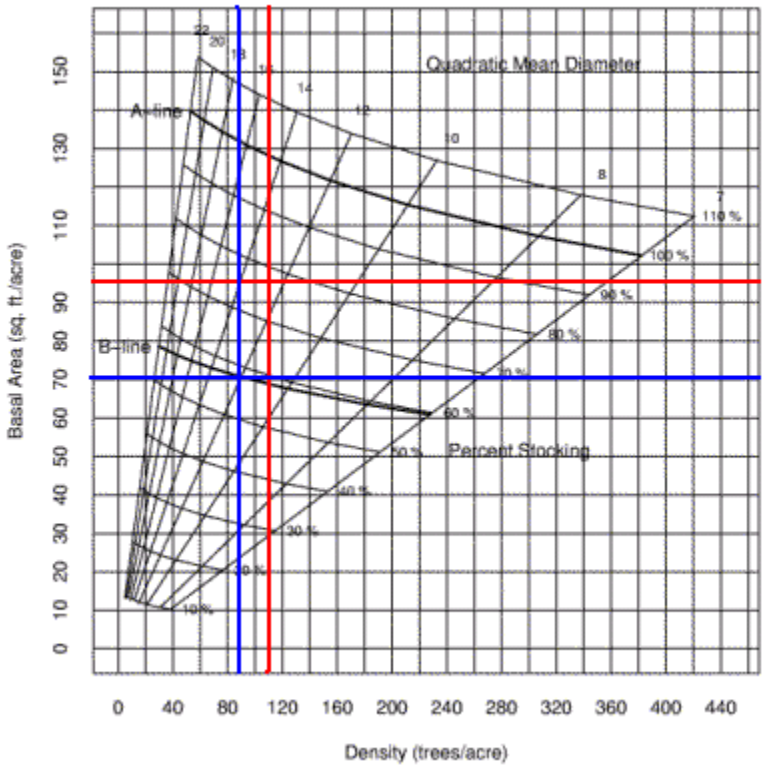
Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Mark harvest and sell timber	2012-2013
Post-Harvest TSI	2015-2016
Inventory and Management Guide	2035

Attachments

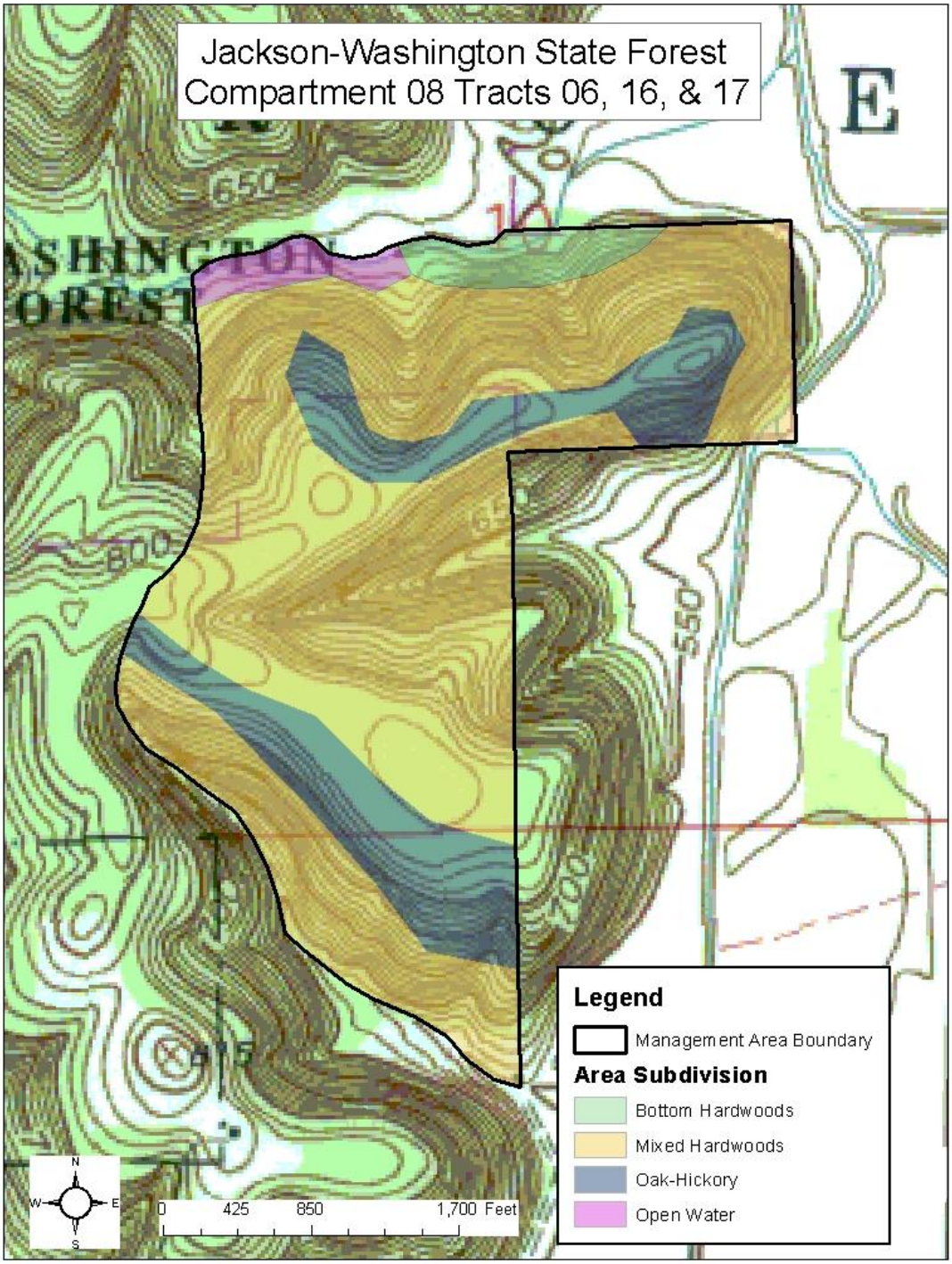
-topo map
-aerial photo
-soils map
-stocking chart

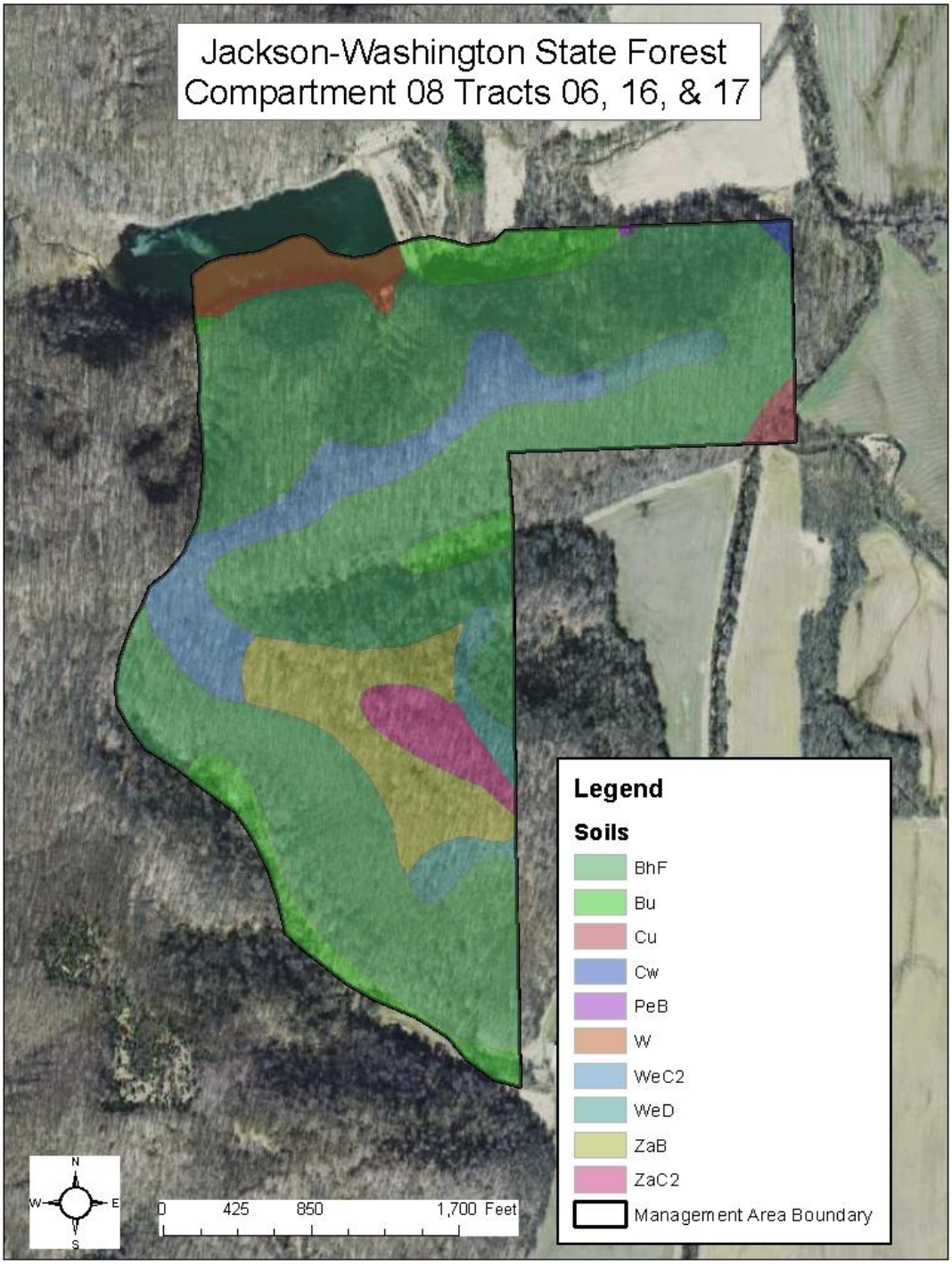
C08 T06, 16, & 17 Stocking Chart
July 2010 Inventory
140 acres

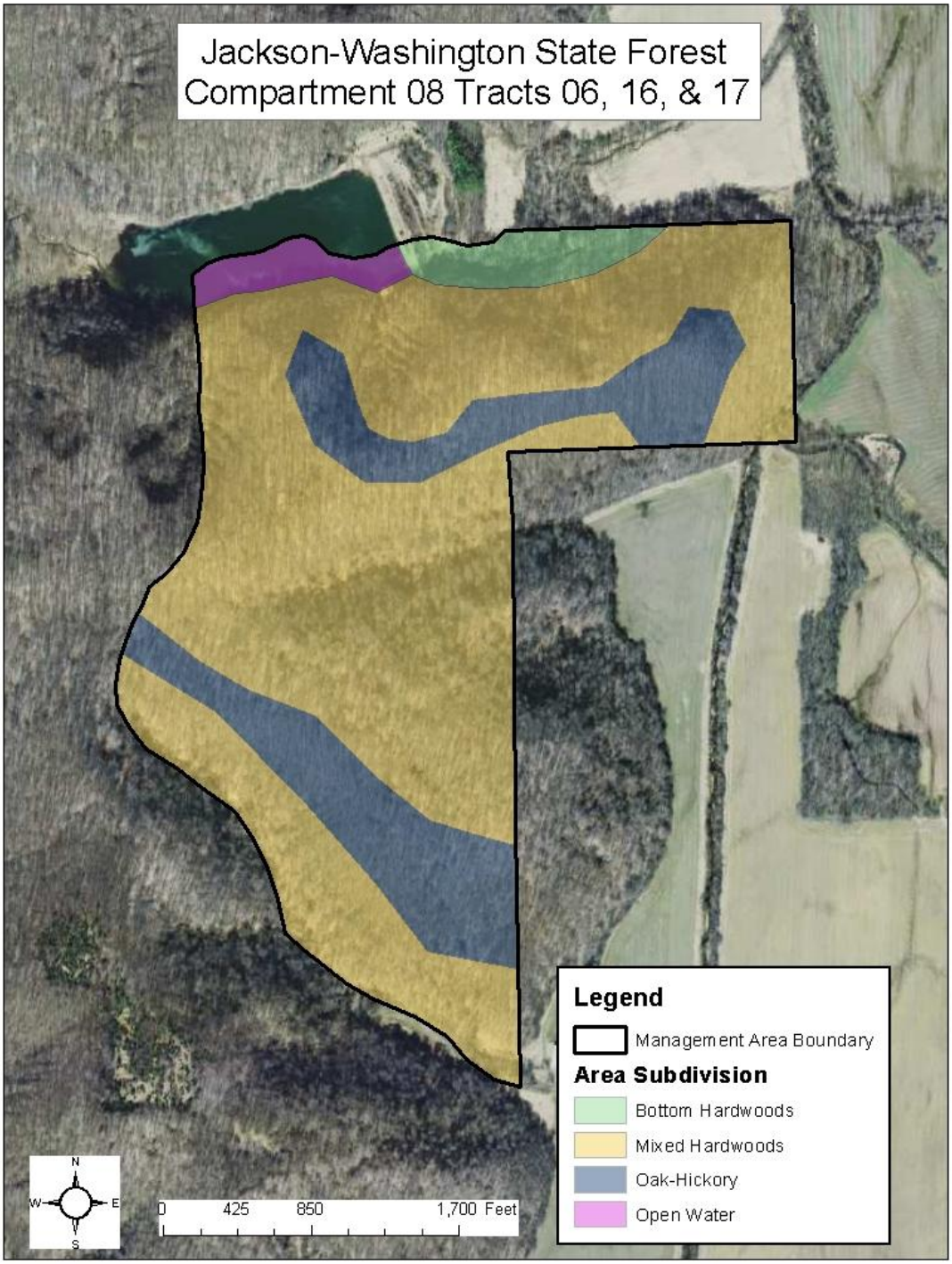


Pre-Harvest Inventory Data in Red
Total BA/A = 95.9 sq.ft./AC
Total #trees/acre (excludes sub-merchantable) = 107
Avg. tree diameter = 13 inches
Percent stocking = 78%

Post-Harvest Inventory Data in Blue
Total BA/A = 68.5sq.ft./AC
Total #trees/acre (excludes sub-merchantable) = 87
Avg. tree diameter = 12 inches
Percent stocking = 60%


Jackson-Washington State Forest
Compartment 08 Tracts 06, 16, & 17
E
650
800
550
615
Legend
Management Area Boundary
Area Subdivision
Bottom Hardwoods
Mixed Hardwoods
Oak-Hickory
Open Water
N
W
E
S
0
425
850
1,700 Feet


Jackson-Washington State Forest
Compartment 08 Tracts 06, 16, & 17
Legend
Soils
BhF
Bu
Cu
Cw
PeB
W
WeC2
WeD
ZaB
ZaC2
Management Area Boundary
N
W
E
S
0
425
850
1,700 Feet



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You must indicate the 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.

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