Indiana Department of Natural Resources
Division of Forestry

DRAFT

RESOURCE MANAGEMENT GUIDE

TM 901, 902, 903, 904

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State Forest:	Ferdinand	Forester:	J. Winner
Compartment:	5	Date:	1/11/2012
Tract:	8		

INVENTORY SUMMARY

Commercial Forest Acreage:	191.00	Average Site Index:	71
Non-Commercial Forest:	0.00	Average Annual Growth:	0
Recreation Use Acreage:	0.00		
Permanent Openings:	0.00	BA (Trees > 10"):	62.40
Acreage in Other Uses:	0.00	BA (Trees < 10"):	35.50
TOTAL AREA:	191.00	Total BA / Acre	97.90

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

Species	Growing Stock	Harvest Stock	Total Volume
AMB	7610	0	7610
SYC	3560	0	3560
BIH	7380	5120	12500
BLC	1980	4800	6780
BLO	55780	95880	151660
WHP	71060	0	71060
REO	20270	21740	42010
PIH	65850	20160	86010
POO	4590	0	4590
REM	0	4810	4810
REP	1940	2330	4270
SCO	26060	0	26060
SHH	22840	0	22840
SHP	2330	2330	4660
SUM	3220	5420	8640
VIP	14730	19200	33930
WHA	3290	15820	19110
WHO	257840	72480	330320
YEP	9250	71410	80660
TRACT TOTALS:	579580	341500	921080

TRACT TOTALS:	579580.00	341500.00	921080.00
PER ACRE TOTALS:	3034.45	1787.96	4822.41

Location

Compartment 5 Tracts 8 & 9 are adjoining tracts located in Sections 20 & 21, T3S, R3W of Dubois County. The tracts are approximately 6 miles south and west of Birdsye Indiana, which is the nearest town.

General Description

Tracts 8 & 9 of Compartment 5 were combined into a single inventory and management guide due to their adjoining boundaries and similar forest type/condition. The tract combined acreage is 191, with tract 8 consisting of 78 acres and tract 9 consisting of 113 acres. The tracts are a mix of Oak-Hickory forest type and other mixed hardwoods interspersed with several areas of planted pine.

History

Tract 8 is made up of three separate purchases. The northwest corner is part of a purchase in 1939 from Leo and Blanche Seufert and Otto and Clara Boeglin which totaled 160 acres. The southwest corner was purchased as part of a tax sale. The northeast corner was purchased from Theodore and Helen Welp in 1966.

The first acquisition for tract 9 was a purchase of 25 acres from Thresia and William Tempel in 1939. An additional purchase occurred in 1966 of 157 acres from Theodore and Helen Welp. A portion of this acreage was included in tract 4. The last acquisition was in 1972. A corrective deed was filed that deeded 17 acres to the state from Edward and Nellie Kline.

The old Princeton-Leavenworth roadbed traverses tract 8 from the county road north through the center of the tract as well as the southern portion of tract 9. The road has steep banks which are evidence of extensive use in past years.

A timber sale over approximately 84 acres of tract 8 was completed in 1988. Approximately 179,000 Bd. Ft. of mostly Black White and Red oak were removed. The sale included salvage from a wind storm in 1987. TSI on the sale area was completed in 1990 by Janet Eger and the Branchville labor crew. Prior inventories were completed in 2003 and 1986. Previous vine TSI was completed in 1988.

Tract 9 had a previous inventory and management plan completed by Doug Brown in 1995. He recommended a small timber sale at that time, as well as some plantation thinning and boundary work. It appears that a sale followed in 1996 over approximately 23 acres. Volume harvested was 57,899 Bd. Ft. Post harvest TSI and plantation thinning was completed in 1999.

Landscape Context

These tracts are part of a fairly large block of state forest property nearly as large and contiguous as the recreation and service areas. However, the surrounding area outside of this is mostly agriculture based. The tracts are also less than one mile from the small town of Siberia.

Topography, Geology and Hydrology

These tracts include most types of topography present on the forest. There are slopes of various aspects and range from slight to relatively steep as well as ridgetops and valleys. Most slopes are slight to moderate, and the steeper areas are in the far western portion of tract 8. There are two potential water impoundments identified in these tracts. Both are in tract 9 and neither were functional at the time of inventory. The ridgetop waterhole in tract 9 was empty although there had been recent precipitation in the area. The second impoundment was an old pond in the southwestern portion of tract 9, but the dam appears to have been breached at some point in the past. There is one mapped intermittent, located in tract 8, which drains to Hurricane Creek. Tract 9 borders a mapped intermittent which drains to the Anderson River.

Soils

Adyeville-Wellston-Deuchars silt loams (AbvD2) is one of the two major soil types located primarily on the ridgetops in tracts 8 and 9. The AbvD2 soil complex is identified as moderately to somewhat excessively drained with a water table depth greater than 40 inches

on sideslopes and uplands. The Deuchars portion has a seasonal high water table at 2-3 feet. Slopes are 8 to 20 percent. In terms of forestland productivity, the Deuchars has a site index of 90 for Red oak. The Wellston has a site index of 81 for Red oak, and the Adyeville portion has no site indexes listed.

Adyeville-Tipsaw-Ebal complex (AccG) is the other major soil type in these tracts and is located on sideslopes and some valleys. The Adyeville soils are somewhat excessively drained with a water table depth greater than 40 inches and are on sideslopes and uplands with slopes of 20 to 50 percent. The Tipsaw soils are somewhat excessively drained with a water table depth greater than 40 inches and are on sideslopes and uplands with slopes of 20 to 50 percent. The Ebal soils are moderately well drained with a seasonally high water table at 2-3 feet and are on sideslopes and uplands with slopes of 20 to 30 percent. In terms of forestland productivity, the Ebal portion has a site index of 80 for Black oak. The Tipsaw portion has a site index of 70 for Black oak, and the Adyeville portion has no site index listed.

Gatchel loam (GacAW) is located in a few drainages within the tract. The soil is occasionally flooded for a very brief duration, somewhat excessively drained with a watertable depth greater than 40 inches, and is located on 0 to 2 percent slopes. There is no site index information listed for the Gatchel loam.

Apalonia silt loam (AgrB,AgrC2) is located in just a few spots throughout the two tracts. AgrB is moderately well drained on 2 to 6 percent slopes with a seasonal high water table at 2 to 3 feet. Site index is 60 for Black oak and White oak. AgrC2 is somewhat excessively drained on 0 to 2 percent slopes with a water table deoth greater than 40 inches. The soil is occasionally flooded for very brief durations. Site index is also 60 for Black oak and White oak.

Access

Access to both of these tracts is very good. Tract 8 is accessed from Calvert Road and Firelane 18. Tract 9 is accessed from Calhoun Road as well as Firelane 18. These could be considered all weather access as the county roads and firelane are graveled. Most areas of tracts 8 and 9 can be accessed via ridgetops off these roads.

Boundary

Line was not flagged during inventory but corners were checked for condition and evidence. Fencing runs along the west line of tract 8 and there is a stone (and posts) marking the ½ section line. There is also an inholding of private property affecting both tract 8 and 9 but its location apparently varies between deeds. For tract 9 east boundary there is a stone also along the ½ section line, as well as a survey marker just south of the southeastern tract boundary.

Wildlife

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.

Wildlife species noted from sight or evidence during the inventory included squirrels, raccoons, deer, crows, a nuthatch and various songbirds. Several deer stands were seen in the tracts, and hunting is sure to be one of the main recreation uses in this area. These two tracts include much of the common habitat across the rest of the property. There is a mix of various pine species that would provide for a larger species diversity than in some other tracts. Hardwood timber is mainly closed canopy forest, but there are some areas of early successional habitat where there has been pine blowdown.

Habitat for the Indiana Bat in these tracts is based upon certain numbers of snags and cavity trees of desired species. There are several numbers to look at to determine a relative suitability of the habitat in these tracts to Indiana Bat. Our "legacy trees" are large living trees of desires species composition. The inventory results show 4533 legacy trees of 11"+ DBH and 551 of 20"+ DBH. The 11"+ DBH range is 2814 above maintenance level but the 20"+ is slightly below maintenance level with a deficiency of just 22 trees. Snags are dead, standing trees that also provide habitat and are broken down by three DBH ranges. There were 2763 snags at 5"+ DBH, 1060 snags at 9"+ DBH, and 80 snags at 19"+ DBH. For the 5"+ range we are 1999 above maintenance level and 1426 above optimal level. For 9"+ DBH we are 487 above maintenance level but are 86 below optimal. For 19"+ DBH we are 16 trees below maintenance level and 111 trees below optimal level.

Communities

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.

There was a concentration of Autumn-olive noted in the far southwestern corner of tract 9, near the county road. This should be treated as time allows; treatment should be balanced with other important issued such as Ailanthus and Garlic mustard infestations in other areas of the forest. Some scattered Autumn-olive and Multiflora rose was found in other areas of the tracts as well.

Recreation

The only recreation facility in these tracts would be maintained parking areas at the gates for Firelane 18. Also the firelanes themselves are maintained and can be used for recreational access. Hunting is probably the most popular recreational activity in this area. Several hunters have been seen here during deer and turkey seasons in previous years.

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.

Tract Subdivision Description and Silvicultural Prescription

Approximately 75% of the management area (144.2 acres) is classified under the hardwood stratum. The inventory estimates 5,078 Bd. Ft. per acre combined harvest and leave volume for a total of 732,290 Bd. Ft. of total sawtimber volume in the stratum. Harvest volume selected was 1,835 Bd. Ft. per acre, 264,640 Bd. Ft. total. Residual volume was 3,243 Bd. Ft. per acre, 467,650 Bd. Ft. total. The attached stocking guide illustrates that the current number of trees and basal area in this stratum corresponds to an 88% stocking. The trees selected for harvest in the inventory would reduce this stocking to 67%, which maintains the stand above the B-line. White oak is the most dominant in terms of species composition with 327,410 Bd. Ft. total, approximately 45% of the total stratum volume. Black oak is the next most common with 151,630 Bd Ft. of volume, which is about 21% of the total stratum volume. Pignut hickory and Red oak are also fairly dominant. Other species in the stratum include Yellow poplar, Scarlet oak, White ash, Shagbark hickory, and others. Post oak was also noted in a few areas within these tracts.

The remaining portion of the management area, 46.8 acres (25%) is classified under the pine stratum. The inventory identified 4,085 Bd. Ft. per acre of combined harvest and leave volume, a total of 191,170 Bd. Ft. Harvest volume was calculated to be 1,633 Bd. Ft. per acre, a total of 76,430 Bd. Ft. Leave volume was calculated to be 2,452 Bd. Ft. per acre, a total of 114,740 Bd. Ft. Eastern white pine and Virginia pine make up a large portion of the volume, which is typical for pine stands on Ferdinand and Pike. These two species account for 53% of the total stratum volume (101,210 Bd. Ft.) Yellow poplar also happens to be a significant component (26%) of the pine stratum with 56,650 Bd. Ft. total volume. This is also typical since Yellow poplar tends to be found as a volunteer growing within old planted pine areas.

Based on inventory and field observations, a harvest is recommended in these tracts. In the hardwood stratum, much of the harvest volume is identified in Black oak. This species seems to be having a proportionally large amount of dieback in the crown and general appearance of stress compared to the other species of oak here and elsewhere in the region. Yellow poplar is another species that has noticeable crown stress and dieback in almost every tract inventoried. Both of these species should be selected for removal where other less susceptible species are competing. An exception to this would include low value and at-risk species such as Blackgum and White ash. No sawtimber sized Blackgum were identified in these tracts, but around 16MBF of White ash were selected for removal primarily due to the

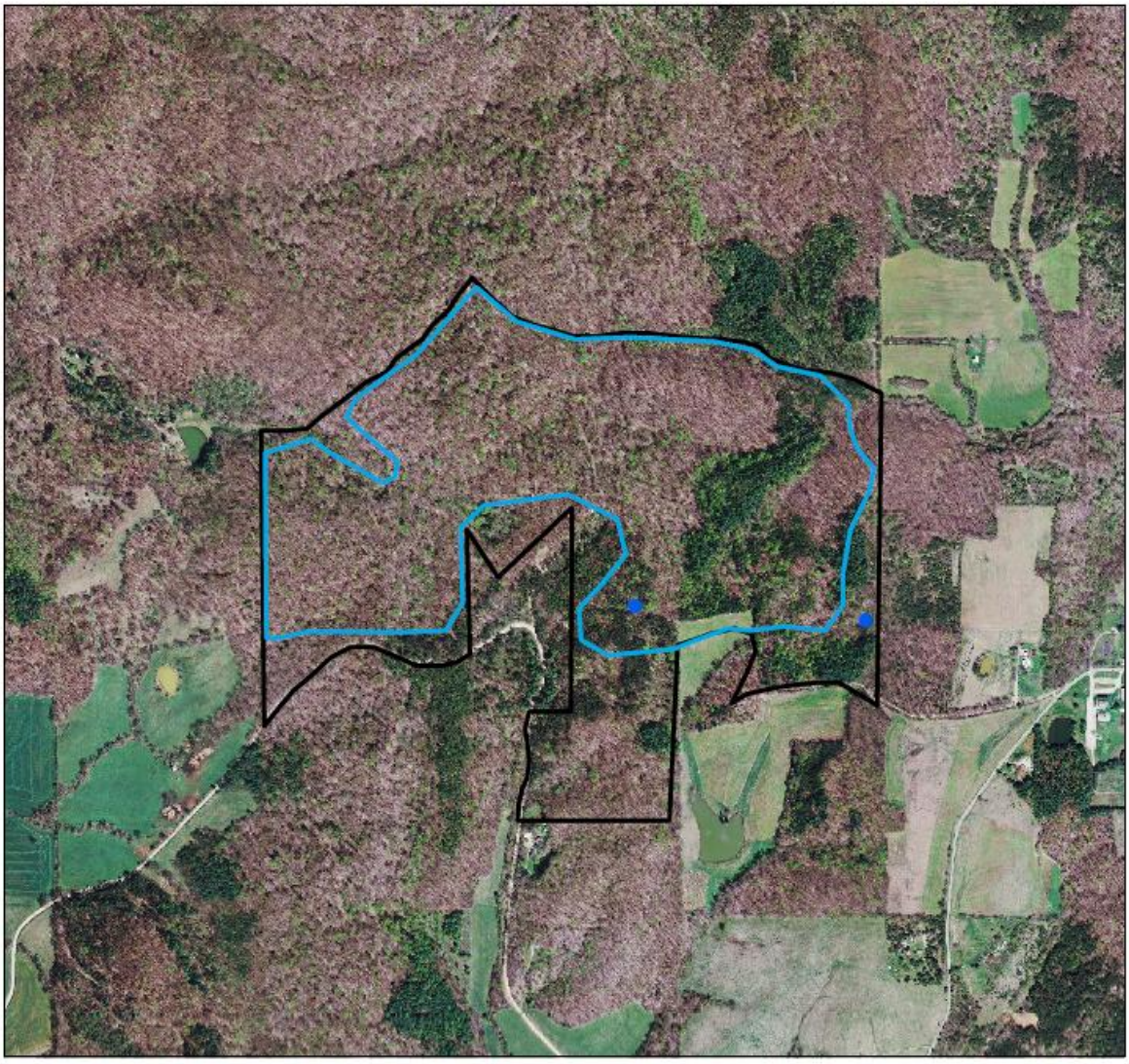
threat of EAB related mortality. Several small groups of dead sawtimber sized trees were noted during the inventory. They seem to have died over several years for unknown reasons, but it does not seem to be a widespread problem.

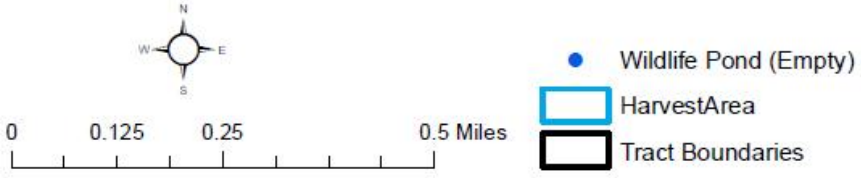
A few areas were identified for understory TSI. The west facing slope in the northwest portion of tract 8 had Dogwood and American beech in the understory with a fairly nice White oak overstory as well as other mixed oaks. There are numerous oak seedlings that could be released with understory TSI on the south facing slope in the north-central portion of tract 9. General oak release could be performed in southern portion of tract 9 as pole sized oaks were noted in this area. An additional area that will require TSI is located in tract 9, north of the southeastern homesite. The north facing slope north and northwest of this homesite is rather low quality, with a significant component of Dogwood. An opening is another possibility to start over here. Finally, there is a lower quality area of timber in the drainage of the southern portion of tract 8 near plot 40. A pre-harvest burn could benefit the area, but might not be possible due to time constraints. An opening combined with post harvest TSI to complete it would be the most practical option here.

Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Treat Autumn-olive	2012-2013
Understory TSI/RX Burn if time allows	2012-2013
Timber Sale	2013-2014
Post harvest TSI	2014-2015
Reinventory Tracts	2027

Compartment 5 Tracts 8 & 9
Features and Proposed Management Map





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