

Ferdinand-Pike State Forest Compartment 11, Tract 05 Forester's Narrative

Location

Tract 05 of Compartment 11 is found in Section 10, T2S, R7W of Marion Township in Pike County. It is approximately 2.7 miles south-east of the town of Winslow. It is situated north of State Road 364.

General Description

This tract is a mix of hardwood and pine. The hardwood portion is approximately 103 acres, while the pine makes up about 18 acres. A small permanent opening (the old Assistant Manager Residence) makes up about 0.4 acres.

History

Acquisition History

This tract originated from two separate acquisitions. The first was from the Board of Commissioners of Pike County in February 1935. The total purchase was for 270 acres of which 120 acres are part of the current tract. The second portion of the tract came from a purchase from Hopeel C. and Grace Deering of Marion County. The tract was approximately 40 acres and was purchased in June of 1958.

This tract was originally split into two tracts along the drainage in the northern 1/3 of the tract. At this time, Pike State Forest was managed separately and the tracts were called 0305 and 0306.

Resource Management History

Rick Burgeson completed quickie cruises for both tracts in February 1971. Only the non-pine portions of the tracts were cruised. The northern tract contained about 28,116 board feet and was prescribed TSI and planting. It was believed that TSI was completed previously, but was not successful. The southern portion of the tract contained 29,808 board feet on 23 acres inventoried. A light cut followed by TSI was prescribed.

Grapevine TSI was completed in October of 1983 in the northern tract, 0305 and again in December 1998.

Approximately 2 acres of White Pine was pruned in October of 1984 to a height of 10-12 feet.

A timber sale was sold in July 1985 in tract 06. The sale contained 53,259 board feet over 55 acres, which was the majority of the tract excluding the Assistant Manager's residence. This sale was put up for bid twice. 25% of the volume came from black oak, 18% came from white oak followed closely by scarlet oak.

A post sale was conducted in 0306 that contained a combination of white and Scotch pine totaling 52 trees in 1986. TSI followed in February of 1987 over 87 acres.

Inventory and management plans were completed in 1983 for both tracts. 0305 was 35 acres of which 10 acres were pine. The tract contained about 3,526.5 board feet per acre with the majority of the stocking in black oak (13%) and yellow poplar (35%). Recommendations for this tract include TSI and thinning the yellow poplar. 0306 was about 54 acres of hardwoods, 31 acres of pine and 2 acres in other uses. The tract contained 4,047 board feet per acre. The biggest portion of the volume came from white oak (30%), scarlet oak (15%) and black oak (12%). This tract was prescribed an improvement harvest to remove oaks infested with gouty oak galls and to reduce basal area.

Vine TSI over the entire tract, 1105 was completed in March 2005.

Landscape Context

This tract is surrounded predominately by forest ground. There are some larger areas of crop ground/ open areas. The closest of these is about 1 mile to the NW of the tract and covers nearly 800 acres. The nearest town is approximately 6 miles to the north-west. Rural residential homes are scattered around the tract.

Topography, Geology and Hydrology

This tract has a ridgetop that runs along the western boundary with several fingers that extend into the tract. There is a drainage in both the northern and southern halves of the tract that flow into a major drainage, Hog Branch.

Soils

This tract has eight different soil types.

Belknap silt loam (Bg) is found on 5.2 acres of the tract along the drainage in the northern 1/3 of the tract. It is typically found on 0-2% slopes on flood plains. It has a root restrictive layer deeper than 60 inches where water movement in this layer is moderately high. This soil is somewhat poorly drained and available water is very high. It is frequently flooded and has a seasonally high water table at 6" during January through March.

Gilpin Silt Loam (GnE) is found on 38 acres of this tract on 15-30% slopes. It is found on hills and in this tract is found around the drainages on the lower to mid slopes. There are large areas in both the north and south portions of the tract. Depth to bedrock is found at 20-40 inches and water movement in this most restrictive layer is moderately high.

Gilpin Silt Loam (GnE3) is found on 15-25% slopes and is severely eroded. The soil covers approximately 15.5 acres on is found on the toes and east facing slopes in southern half of the tract and on the slopes surrounding the drainage in the north half. Bedrock is found in this soil at 20-40 inches. It is a well-drained soil and has moderately high water movement.

Steff Silt Loam (Sf) is found on 0-2 % slopes and is frequently flooded. It is found on approximately 6 acres along the drainage on the east side of the tract. The soil has a restrictive root layer at more than 60 inches. The soil is moderately well drained and has moderately high water movement. This soil has seasonal high water saturation at 18" in January through March.

Wellston Silt Loam (WeE) is found on 15-30% slopes on benches. This tract has approximately 2.2 acres and is found in two small areas in the north east corner and one on the south. It is a well-drained soil with moderately high water movement and moderate available water.

Zanesville Silt Loam(ZaB) is found on 2-6% slopes on hills. Bedrock is found at 60-96 inches. It is a moderately well drained soil and water movement is very low. It has a seasonal zone of water saturation at 30 inches in December through April. The soil is found on 31.5 acres and covers most of the ridgetops in the central part of the tract with smaller areas in the extreme northern and southern portions of the tract.

Zanesville silt loam is found on 6-12% slopes and is severely eroded. It is found on hills and Bedrock is found at 60-80 inches. It is a moderately well drained soil. Water movement is very low and available water is moderate. It has a seasonal zone of water at 18" in March. It is found on 20 acres on the mid slopes between the ridgetop and the drainage.

Zanesville Silt Loam (ZaD3) is found on 12-18% slopes and is severely eroded. It is found on hills. The soil has a fragipan at 12-24 inches and is moderately well drained. Water movement in its most restrictive layer is very low. It has seasonally high water at 18" in March. The soil makes up only 3.4 acres with the majority in the upper north-east corner.

Access

This tract has very good access. The southern boundary is made up of State Road 364 and an unimproved county road (550E) makes up the western boundary. This tract can be accessed fairly well internally by firelane 2, which bisects the tract. In addition, a horse trail wanders along the northern boundary.

Boundaries

The northern and south-west half of the western boundary and the west ½ of the southern boundary are the only areas bounded by private land. The east boundary is shared with Tract 4 of this Compartment, while the north-west ½ of the west boundary is shared with Tract 6. Hog Branch makes up the east boundary. Line evidence for this tract includes a T-post on the north-west corner and pink flagging along the northern line.

Wildlife

Wildlife in this tract is typical of the area. Fauna species observed during the course of the inventory include: deer (sign as well as auditory), a box turtle, a flock of birds, frogs and a woodpecker. The tract shows good variety of habitats containing pine, pine-

hardwood transitional areas as well as hardwood forest. The drainages within the tract and nearby provide temporary to permanent water sources. The heavy down debris found within the pine-hardwood transitional areas as well as the moderate amount throughout the rest of the tract provide cover for ground dwelling birds, mammals and herpitiles. The tract has a large oak component that provides a good food source for a variety of species. The top oak species is black oak that while palatable is not as preferred as white oak, which comes in a close second on abundance. Hickory another favored foodstuff is moderate throughout this tract with shagbark and pignut making up the hickory component.

Indiana Bat Strategy

The Indiana Division of Forestry recognized the potential to enhance the Indiana bat habitat on its lands by implementing comprehensive management principles. These management principles include obtaining data on size, species, and numbers of snag trees. Snag trees and some specific species are an integral part of the Indiana bat policy as they are prime roosting sites for maternal colonies.

The inventory determined there were a total of 3.7 snags per acre – 9 inches dbh to 19 inches dbh and 0.46 snags per acre for 19-inch dbh and above. These do not meet the requirements under the guideline of 5 snags per acre 9-19 inches dbh plus 1 per acre – 19 inches dbh. Since both the smaller diameter limit and the upper diameter requirements fall short of the guidelines, snags should be maintained while marking any harvest and promoted during the TSI processes.

In addition to the snag requirements the bat policy calls for a minimum of 3 live trees/acre >20 inches dbh and an additional 6 live trees per acre >11 inches. These should be of a species having characteristics favorable to the Indiana bat. For preferred species, the numbers were 8.5 trees per acre for 11-20 inches and 1.3 trees/acre for 20 inches and over. Neither of these two requirements meets the required levels as outlined in the Indiana Bat Habitat Guidelines.

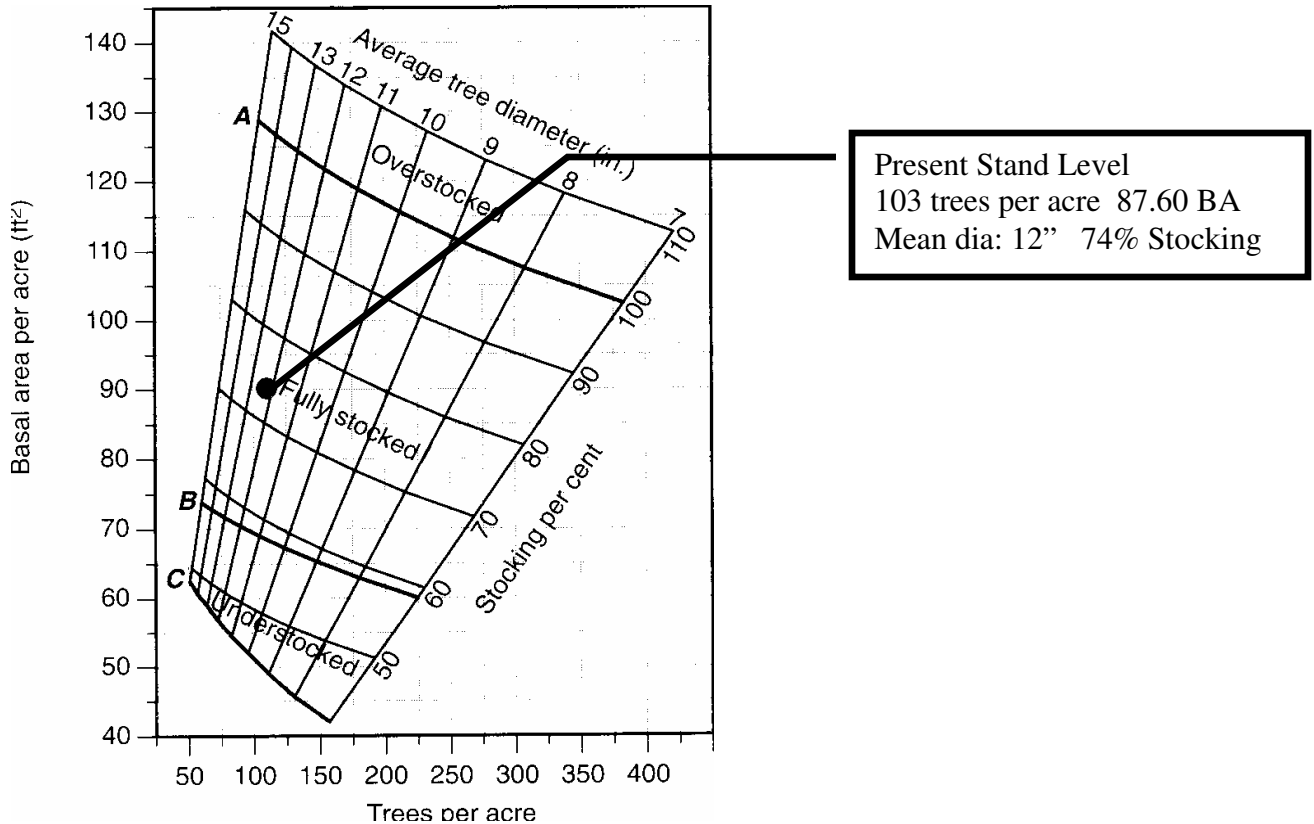
Communities

The typical plant communities of southern Indiana cover the area. Greenbrier and multiflora rose are commonly found. Upon a search of the Natural Heritage Database, one species was found in a nearby tract to the north-east. This species was *Phacelia ranunculacea* or Blue scorpion weed. It was found along the banks of Hog Branch. Since this plant was not found within the tract boundaries at this time, no special action to avoid this plant need to be taken as long as harvesting activities avoid the site and no occurrence of the species is found within this tract. If this species is found within the tract's boundaries, the area should be protected from harvesting activities.

Forest Condition

This area holds an estimated 613,120 total board feet with an estimated 386,390 board feet assigned as leave volume and 226,730 board feet designated as harvestable volume. The largest amount of the leave volume comes from yellow poplar (131,060 board feet), black oak (59,120 board feet) and white oak (51,070 board feet). The same species hold

the top spots for harvest volume as well with yellow poplar comprising 44,540 board feet, white oak with 19,350 board feet and black oak with 20,220 board feet.



Recreation

Recreation in this tract is fairly heavy. While the campground does not lie within the tract's boundaries, it is close enough to receive heavy use from the horseback riders as well as hunters due to the ease of access.

Cultural Features

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 and Prescription

Pine

This tract has about 18 acres total of pine. The majority of this acreage is white pine, approximately 15 acres. This white pine is broken up into small acreages, with the largest being around 6 acres and the smallest around 1 acre. Most of the white pine in the 6 acre group is sawlog sized and the area is heavily stocked. Harvesting of this area would help

to speed up the conversion of the area to a hardwood timber type. Hardwoods currently exist in the understory and include yellow poplar and oak.

Two 3-acre pine stands lie to the north and the west of the larger pine stand in the center of the tract. One has very heavy stocking and a closed canopy. There is very little hardwood regeneration. The patch to the north is mainly white pine with some red pine. The area has moderate stocking with mostly hickory in the understory. A small stand of Virginia Pine lies on the east side does have some hardwoods moving in.

Another heavily stocked stand lies along Hog Branch. In the northern portion of this area, the white pine is medium to large sawtimber with hardwoods in the canopy. However, they are typically poorly formed and damaged. There is also some young oak in the overstory. In the southern portion of this acreage, the pine becomes smaller and the area has heavy hardwood understory.

Yellow Poplar

This timber type constitutes approximately 26 acres. Yellow poplar makes up about 4,212 board feet per acre with only about 784 available for harvest. There is only one fairly large block in the north-east corner of the tract, which makes up around 9 acres. The remainder of the acreage is distributed in three areas surrounding the pine stands in the center of the tract. Some of this timber type is intermingled with the pine in the south-east corner of the tract.

Most of the yellow poplar in the north-east corner is there as a result of the planted pine dying out and natural regeneration of the hardwoods. Here the yellow poplar varies widely not only in quality but also in size. Some areas have good quality poles and small sawtimber while some areas have large wolfy trees with some defect. Overall, the area shows little promise for harvest this cycle.

The area with the most potential for harvest lies around the pine areas in the center of the tract. Here there are larger yellow poplar, but they are typically poorly formed and/or damaged. There is very little understory in some areas, but in others removing the yellow poplar will help release white oak. These areas could be harvested if nearby areas are being harvested as well.

The remaining yellow poplar acreage is in small islands that are a result of pine conversion. The individuals are small, have fairly open canopies and the stocking is made largely of small diameter trees. Quality varies here as well from good to poor.

Mixed Hardwoods

This timber type covers approximately 25 acres of the tract. One of the bigger portions of the acreage (7 acres) is in the south-west part of the tract with the biggest acreage (9 acres) is on the mid to upper south-east facing slopes along the drainage ways. The remainder of the acreage is scattered throughout the tract in small 1-2 acre patches.

The 7-acre portion is mostly old pine areas that have become hardwood conversion areas. The canopy is typically open with decent maples, poor quality yellow poplar and many smaller diameter trees. There is also a patch of black locust and areas with lots of broken tops. The majority the area is available for harvest and in one area; an opening would be a possibility.

The 9-acre portion is also an old pine area where most of the pine is on the ground with very little to none standing. The area consists of very scattered mixed hardwoods. In some areas, lone yellow poplars make up the entire canopy. There are a lot of down trees and not much understory in this area.

The remaining acreage is broken into 1 to 4-acre parcels that all have some sort of topographical or other land feature that break the areas off to create the separate timber type. The areas are very scrubby with small diameter trees and very heavy underbrush. They all have low stocking.

This timber type has approximately 313,280 board feet total with approximately 57,520 board feet available for harvest.

Oak

This timber type makes up the bulk of tract's acreage with approximately 57 acres. The timber type generally falls around the side slopes and a couple of the ridgetops in the tract. Oak is the main component of the timber type, but has areas where the secondary species varies. In some areas this is yellow poplar, while in others, it is the typical oak-hickory composition.

The poplar-oak composition tends to fall on the peripheries of the pine areas, and between the mixed areas. The largest part lies in the north-west corner of the tract along the side slopes. Here the yellow poplar varies in quality from decent to larger, overmature trees with some defect. Here thinning in some areas will release pole/sawtimber trees, some of which are oaks.

The remaining locations where yellow poplar is codominate are typically on edges of old pine and the yellow poplar is the species that was first introduced into the opened area. The oak is generally wolfy. These areas are open canopied and have mostly maple, sweetgum and some hickory.

The oak-hickory mix typically lies on the slopes and increases away from the pines. There are some nice areas of oak species that are fairly scattered. Most areas have open crowns, with only a few low forking and are thinly stocked.

This timber type constitutes about 268,470 board feet or 5,593 board feet per acre, of this about 1,577 board feet available for harvest. The largest part of this volume coming from black oak, white oak and yellow poplar. Individuals that would be good candidates for harvest would include individuals that release better quality oaks in the case of those areas with heavy yellow poplar and the poorer quality and overmature white oak, black

oak and red oak. There is one location for a possible opening as the current canopy is larger black oak that while it is decent, there is very little that would be released were a harvest to occur. This area lies around the toe of the pine stand in the northern 1/3 of the tract.

SILVICULTURAL PRESCRIPTION

This tract still has a small component of pine. Although the total acreage has declined, the acres that were once pine are now open, scrubby areas with little merchantable timber available for harvest. These areas would be best left alone.

Pine areas contain mostly white and red pine. These areas although beneficial in their initial use, are now ready for removal if markets exist for these species. Some of the White Pine is rather large and could make a fairly decent timber harvest. The Red Pine, although smaller, could have a better chance market wise for a harvest. However, the pine that is located to the east of the property manager's residence may need to be left from a stand point of aesthetic concerns regarding SR 364.

The hardwoods in this stand vary quite a bit. The combination of the two tracts into one has created one tract, but the timber is still noticeably different due to past management activities. Since the previous timber harvest was restricted to the southern 2/3, the northern 1/3 now has more potential for a timber harvest. This northern portion now contains large, overmature Scarlet Oak that is ready for harvest. The area also has some Yellow Poplar that would benefit the stand most if it were to be removed. Overmature Red oak and Black Oak also occupies the stand and removal of these select trees would stimulate other species growth. These trees are generally fair to poor in form and quality and most are declining in health. Due to the small acreage, however, it may be beneficial to wait until the lower 2/3 has had time to catch up and both could be harvest at one time.

The southern portion is patchy in terms of harvestable timber. Much of the area was once pine, which was not harvested in the 1983 sale. The area that was harvested now contains mostly small sawtimber White Oak and hickory. Areas that could handle a harvest include the north and south facing slopes behind the property manager's residence. This area has some large black and red oak that are overmature and should be removed. The acreage that encompasses this likeness however is very small and removal of this timber is probably more of a problem than leaving for the next rotation. The White oak that makes up the majority of the stand is small and in some places the trees are competing with each other. TSI would benefit these stands of white oak removing some of the poorer quality and allow the others to take off. Vine TSI throughout much of the tract would also be beneficial.

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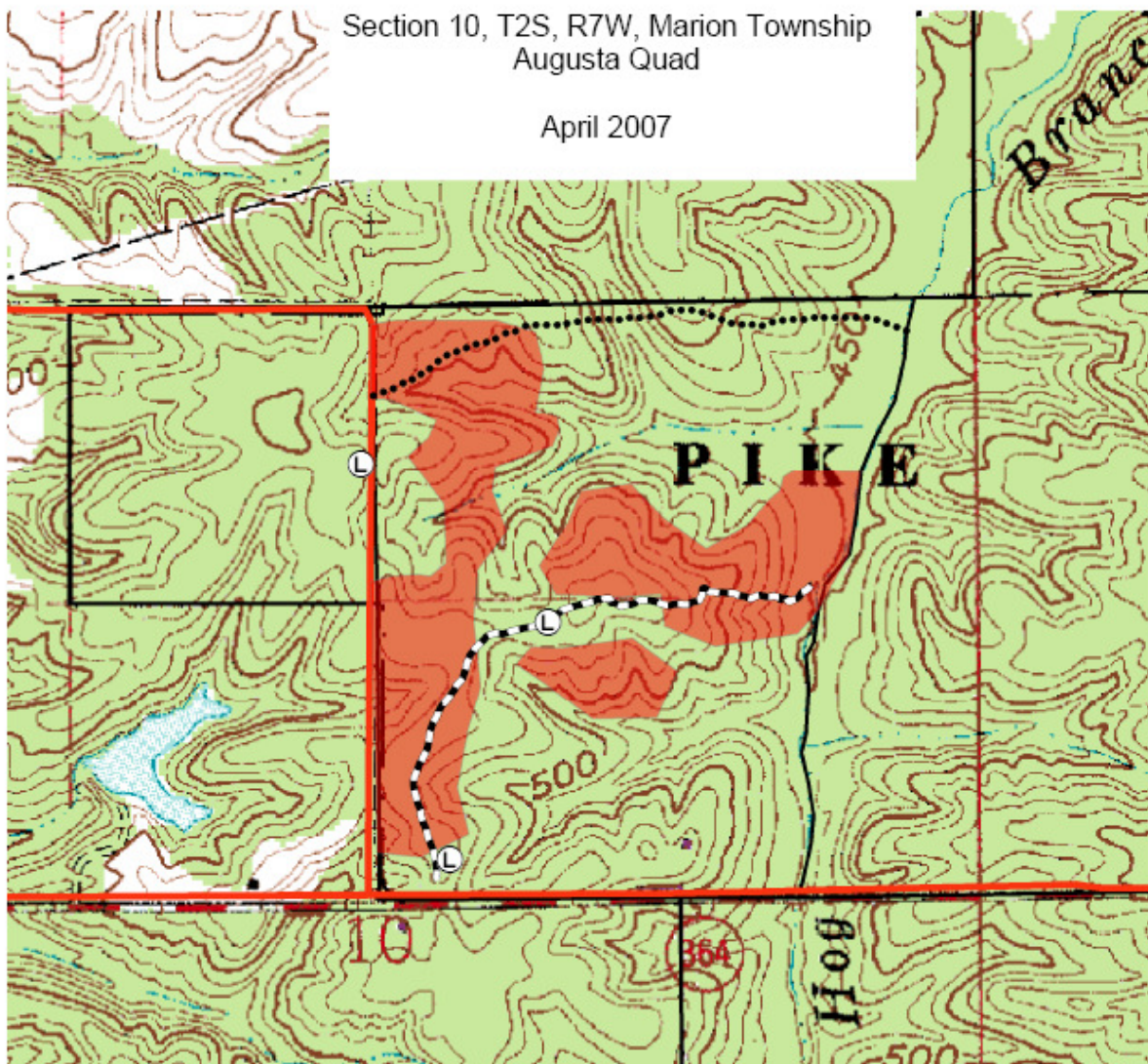
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Pike State Forest
Compartment 11, Tract 05

Harvest Map

Section 10, T2S, R7W, Marion Township
Augusta Quad

April 2007



Legend

- Ⓛ logyards
 - █ Possible Harvest Area
 - ▭ FSF Property
 - ▬ Firelane 2
 - ▬ Roads
 - ⋯ Horse Trail
- 1:7,920