

Indiana Department of Natural Resources - Division of Forestry

Resource Management Guide

Ferdinand State Forest - Compartment 06 Tracts 07 and 08

Ferdinand State Forest
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Site Index: 65

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Location:

These tracts are located in parts of SE ¼ Section 29, NE ¼ Section 32, N ½ Section 33 T3S R3W, Perry County, IN. They lie about 1.5 miles SW of Siberia, IN.

General Description: These tracts cover 242 acres (tract 0607 is 79 acres and tract 0608 is 163 acres). They are covered by closed canopy forest.

History:

Tract 0607:

This tract was acquired in two separate parcels. The first parcel (79 acres) was purchased in 1939 from Joseph and Emma Leinenbach. This is the south part of tract 0607, tract 0611, and the portion in between that is now the Interstate 64. The rest of the tract was acquired from a 110 acre purchase from George Schenetzke in 1942. Part of this purchase is in tract 0608 and part of it is now Interstate 64.

Around the late 1960's or early 1970's 35 acres of tracts 07 and 08 were transferred to state highways for I-64 right-of-way. The affects of this, besides the loss of acreage, was the splitting of tract 07 into tract 07 and 11 as well as the loss of access for tracts 07 and 08.

Bill Hahn inventoried this tract in 1973. He reported 3,110 bd. ft. per acre on 60 acres of hardwoods (this included tract 0611). At that time there were no roads into the tract and he noted much deteriorated stumps. He recommended a harvest within 10 years, planting over an open area (never done) and a road system.

In 1975, Ben Hubbard combined a timber sale on tract 07 and 08. Over 116,000 bd. ft were harvested in 1126 trees. There was no record of a post harvest TSI.

In 1988 the existing firelane was improved and widened with a dozer.

Doug Brown did an inventory on this tract in 1994. He recommended a harvest over about 50 acres with about 2,000 bd. ft. per acre to be harvested. A harvest of 77,171 bd. ft. on 55 acres along with a vine TSI was done in 1994.

Firelane 20 was extended to the main ridge in 1996.

The 2 acre regenerational opening was thinned in 2008.

Tract 0608:

This tract was purchase in three parcels. The first parcel was purchased in 1939 from Mary Guntel. This is the northern most part of this tract and also included all of tract 9 and much of tract 10. The second parcel was purchased from George Schenetzke in 1942. This was the south and east part of the tract and included part of tract 7. No other information is available from these parcels prior to State purchase. The last parcel purchase was the 40 acres in the west part of the tract. This was purchased in 1951 from Robert and Rita Lehmkueller and William F. and Frosta Lehmkueller for \$10.00/acre. The land examination report stated that the larger trees had been cut in the last year and about 10 acres would need planting. It is unknown exactly when the pines were planted. 22,675 trees were planted on the Guntel Farm in 1950. Some of those trees may have been planted on this tract. There are no references to the pines in the rest of the tract being planted.

The tract was inventoried by Bill Hahn in 1973. He estimated an average volume of 3,330 bd. ft/acre on 92 acres of hardwoods. He recommended a timber harvest along the east boundary. In 1975 this area was combined with tract 7 and 116,040 bd. ft. of timber in 1,126 trees was sold. There is no evidence or record of a post harvest TSI. In 1988 the firelane was improved with a dozer.

An inventory was done on this tract by Doug Brown in November of 1993. He recommended a timber sale which was done in 1994. 167,450 bd. ft. in 1,030 trees was cut off of tracts 0608 and 0607. A one acre shelterwood was put in in 1994. Some TSI has been done on it over the years but from the reports it doesn't look to be doing that well. At the last inspection there was lots of SAS regeneration with YEP, BLG, BLC, and SUM; with little to no oak regeneration present.

A post harvest TSI was done in 1996.

Landscape Context:

These tracts are located at the southern portion of Compartment 6. Interstate 64 runs along the southern portion of these tracts and the right-of-way butts up against the far southern boundaries. The land to the east and west are privately held. Firelane 20 runs through these tracts from the north to provide access. A small tract of land directly across the highway is state land. It used to be a part of tract 0607 until the highway bisected this parcel and created the two tracts. The majority of the land surrounding this tract is held privately. The surrounding land is either in forested land or agricultural land with residential houses scattered throughout the landscape.

Topography, Geology and Hydrology: The topography of these tracts consists of one main ridge running through the center of tract 608, running east to west, and the rest of the land sloping away from this. There is also one main ridge running through the center of 607 that runs roughly north/south with the rest of the land sloping away from this.

The parent material of Perry County consists of sandstone, limestone, shale, lacustrine deposits of Wisconsin age, and loess. The underlying material of this specific tract

consists of Mississippian rocks that are made up of shale, sandstone, and thin beds of limestone.

The drainage pattern of this tract consists of Stapleton Run Drainage to the south that catches the vast majority of water coming off of this tract. From there the water flows into the Anderson River which eventually makes it way to the Ohio River.

Soils:

AccG - Adyeville-Tipsaw-Ebal complex, 20 to 50 percent slopes, very rocky.

The Adyeville soils are somewhat excessively drained, have a watertable at a depth greater than 40 inches and are on sideslopes on uplands. Slopes are 20 to 50 percent. The native vegetation is hardwoods. The surface layer is very fine sandy loam has moderate or high organic matter content (2.0 to 6.0 percent). Permeability is moderate in the most restrictive layer above 60 inches. Available water capacity is low (4.0 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 3.5 to 5.5. Bedrock is at a depth of 20 to 40 inches. Droughtiness and water erosion are management concerns for crop production. The Tipsaw soils are somewhat excessively drained, have a watertable at a depth greater than 40 inches and are on sideslopes on uplands. Slopes are 20 to 50 percent. The native vegetation is hardwoods. The surface layer is very fine sandy loam has moderate or high organic matter content (3.0 to 8.0 percent). Permeability is moderate in the most restrictive layer above 60 inches. Available water capacity is low (3.3 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 3.5 to 5.5. Bedrock is at a depth of 20 to 40 inches. Droughtiness and water erosion are management concerns for crop production. The Ebal soils are moderately well drained, have a seasonal high watertable at 2.0 to 3.0 ft. and are on sideslopes on uplands. Slopes are 20 to 30 percent. The native vegetation is hardwoods. The surface layer is silt loam has moderate or high organic matter content (2.0 to 6.0 percent). Permeability is very slow (< 0.06 in/hr) in the most restrictive layer above bedrock. Available water capacity is moderate (7.2 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 3.5 to 5.5. Bedrock is at a depth of 50 to 80 inches. Droughtiness and water erosion are management concerns for crop production.

AbvD2 - Adyeville-Wellston-Deuchars silt loams, 8 to 20 percent slopes, eroded

The Adyeville soils are somewhat excessively drained, have a watertable at a depth greater than 40 inches and are on sideslopes on uplands. Slopes are 8 to 20 percent. The native vegetation is hardwoods. The surface layer is silt loam has moderately low or moderate organic matter content (1.0 to 3.0 percent). Permeability is moderate in the most restrictive layer above bedrock. Available water capacity is low (4.1 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 3.5 to 5.5. Bedrock is at a depth of 20 to 40 inches. Droughtiness and water erosion are management concerns for crop production. The Wellston soils are well drained, have a watertable at a depth greater than 40 inches and are on sideslopes on uplands. Slopes are 8 to 20 percent. The native vegetation is hardwoods. The surface layer is silt loam has moderately low or moderate organic matter content (1.0 to 3.0 percent). Permeability is moderate in the most restrictive layer above 60 inches. Available water capacity is moderate (8.8 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 3.5 to 6.0.

Bedrock is at a depth of 40 to 60 inches. Droughtiness and water erosion are management concerns for crop production. The Deuchars soils are moderately well drained, have a seasonal high watertable at 2.0 to 3.0 ft. and are on sideslopes on uplands. Slopes are 8 to 20 percent. The native vegetation is hardwoods. The surface layer is silt loam has moderately low or moderate organic matter content (1.0 to 3.0 percent). Permeability is slow (.06 to 0.2 in/hr) in the most restrictive layer above 60 inches. Available water capacity is moderate (9.0 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 3.5 to 6.5. Bedrock is at a depth of 60 to 80 inches. Droughtiness and water erosion are management concerns for crop production.

AgrC2 - Apalona silt loam, 6 to 12 percent slopes, eroded

This moderately well drained soil has a seasonal high watertable at 2.0 to 3.0 ft. and is on sideslopes on uplands. Slopes are 6 to 12 percent. The native vegetation is hardwoods. The surface layer is silt loam has moderately low or moderate organic matter content (1.0 to 3.0 percent). Permeability is very slow (< 0.06 in/hr) in the most restrictive layer above 60 inches. Available water capacity is moderate (7.2 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 4.5 to 6.0. Bedrock is at a depth of 72 to 100 inches. Droughtiness and water erosion are management concerns for crop production.

Access:

Access to these tracts is limited to Firelane 20. To get to the firelane head east on Calvert Rd and firelane 20 will be on the south side of the road after approximately .9 miles. The firelane runs through tracts 0610, 0609, and 0608 before it reaches tract 0607 midway along its western boundary. The firelane then follows the western boundary of 0607 almost all the way to the southern boundary. From there access further into the interior of the tracts is via foot.

The majority of the firelane is in good shape currently but there is one steep slope and the last blue line stream crossing is questionable.

Boundary: The far northern boundary of these tracts is marked by an unnamed drainage that empties into Hurricane Creek. (This also marks the southern boundary of tract 0609.) The east is bounded by private land. There is some fencing still present as well as a survey stone in the NE corner of 607. The south is marked by Interstate 64 and is fenced. The western boundary is largely unmarked. There were stones noted on each corner of the 40 acre square that juts out on the southern half of the west side. These stones were noted in 1993 and it was also noted that they may not be entirely accurate.

Wildlife: This tract likely supports a wide range of wildlife typical of the area. Habitat types vary from drainage bottoms to ridge tops. Animals noted during the inventory are turkeys, crows, squirrels, deer, lizards, and a wide range of song birds.

All the streams present on these tracts are intermittent and no water was present at the time of inventory (note: the inventory was done during an unusually hot and dry summer/fall). However, there is a wildlife pond present on tract 0607 as well as a pond on private land along the south west boundary of tract 0608. Both of these hold water year round.

Game animals likely receive a fair amount of hunting pressure on these tracts. Four hunting stands were noted on the tract 608 as well as an illegal ATV trail that has been put in from the adjoining private property to the east. At the time of the inventory this illegal trail had been recently mowed so it is assumed that it will be used for hunting season. Bow hunters were utilizing these tracts to hunt deer during the inventory and hunters have been known to park on Hwy 64 and access this tract.

Current policy on managing for the federally endangered Indiana bat requires a certain component of snags and live trees of specific sizes and species. This tract meets the live tree target in the 11"+ and the 20"+ size class.

This tract does meet the snag requirements of the 5"+ size class but does not meet the snag requirements in the 9"+ or 19"+ size classes. In order to meet the requirements 45 snags of 9"+, and 119 snags of 19"+ need to be created. This is easily done by girdling trees that are appropriate to reach this goal. These trees could be culls or lower valued species (within the desired species list for the Indiana bat).

A search of the Natural Heritage Database was dated 6/15/2009. If any endangered, threatened, or rare species were noted, the plan of activities for this tract took those into consideration.

Communities: The dominate cover type on these tracts is closed canopy oak/hickory with white oak, black oak, and pignut hickory being the dominant species. There are also areas of pine present that are overmature and stagnated. Portions had an unsuccessful TSI cut so these trees are especially stagnated and poorly formed. Some areas have large amounts of mortality. Along the drainages there are areas of mixed hardwoods.

Invasive species noted on these tracts are honeysuckle and multiflora rose. These are scattered and not all that prevalent.

Recreation: Recreation opportunities on this tract include hunting, hiking, bird watching, and non timber forest product harvesting. It is likely that the highest number of recreational users of this tract are hunters.

An illegal ATV trail on tract 608 indicates that ATV use is prevalent on this tract.

In addition to hunting, other recreational opportunities that these tracts offer are hiking, bird watching, and non-timber forest product harvesting.

Cultural: Cultural resources are to be protected on State Forests. If any resources were noted on this tract the plan of activities took them into consideration.

Tract Subdivision Description and Silvicultural Prescription:

Both of these tracts are covered in closed canopy forests. All of the areas of hardwoods will be managed together but for descriptive purposes the different cover types will be discussed separately.

The overall stocking of these tracts is right above the A-line at 105%. This shows that the site is currently overstocked.

Oak/Hickory: This is the dominant cover type with white oak, black oak, and pignut hickory being the dominant species present. There are some areas that have high quality white oak and/or the potential of high quality white oak present. Some of the black oak present is overmature and/or showing some mortality. These over mature trees along with poorly formed trees should be taken during the next timber harvest to release the crop trees that are present. In addition, oak regeneration should be encouraged in areas where it is likely that it will be successful. There are some areas that currently have competitive oak regeneration present. These trees should be released.

Mixed Hardwood: This is mainly in the drainage areas and consists of sugar maple, yellow poplar, American beech, ash, and other mixed species in low numbers. These areas aren't as high value as the oak/hickory areas but will be managed in a similar way. Overmature and poorly formed trees should be taken during the next timber harvest. There is some large, drought stressed yellow poplar present that should be harvested. Additionally, some trees were unsuccessfully girdled during a TSI cut; these trees should be taken out as well.

Pine: There are some areas of pine present on these tracts as well as areas where pine is a component of the overstory within hardwoods. In some areas the pine trees were unsuccessfully girdled during a TSI cut. There is a high amount of mortality within the pine stands as they are overmature and stagnated. There are some small openings that have been created due to pine mortality. Competitive oak regeneration is very good under the pine stands. All pine should be removed during the next timber harvest. This will release the oak regeneration as well as capture the value of the pine before further mortality occurs.

Summary Tract Silvicultural Prescription and Proposed Activities:

- 2011: Mark boundaries along private land on 608 & 607
- 2011: Take down deer stands and block ATV trail on 608
- 2012: Harvest 1,911,440 board feet over 242 acres (the entirety of tracts 607 & 608)
- 2013: Post harvest TSI
- 2031: Inventory

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