

Resource Management Guide Compartment 12 Tract 01

Ferdinand State Forest
Amanda Bradshaw-Burks

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Location: This tract covers parts of the NE ¼ of the SE ¼ of Section 10, the W ½ of the SW ¼ of Section 11, the N ½ of the NW ¼ of Section 14 T2S R7W in Marion Township, Pike County Indiana. It is located south of State Road 364 approximately 3.75 miles from the State Road 61 and State Road 364 intersection.

General Description: This tract generally has relatively lower valued timber in the southern part of the tract. There is a lot of underbrush and green brier. There are some areas of pine present on this tract that have stagnated. Overall the timber becomes higher quality the farther north you get. Lots of very large trees but many are overmature and need to be harvested.

History: Past Silvicultural treatments are for the northern 70 acres only. The northern 70 acres were inventoried in 1971, 1975, and 1983. The most current inventory (done by Janet Eger) indicates that the tract contained about 178,033 board feet with about 42,070 board feet being harvest stock and prescribes a harvest for about 16 acres. This improvement harvest removed approximately 42,711 board feet that “because this tract is also used for other purposes such as recreation, a deliberate attempt was made to harvest the tract in a manner which knowingly would not silviculturally optimize fiber production.” TSI was done in 1986 and covered 22 acres of the tract. Individual trees were girdled or frilled and treated with herbicide.

Acquisition of this tract has spanned 66 years. The eastern 30+ acres was part of a 270 acre acquisition from the Pike County Board of Commissioners in February of 1935. The northwest 40 acres was purchased from Stanley O. and Carole Ann Nelson of Pike County in June of 1968. The remaining acreage of the tract was part of a 248 acre purchase from James C. Ellis III, trustee of the James C. Ellis Trust, in November of 2001.

Landscape Context

This tract is within a group of 9 tracts that makes up Compartment 12. This tract is located on the NW corner of this compartment and creates the W boundary for tract 1202. Compartment 11 is directly north of this tract and tracts 1105 and 1104 are connected to tract 1201's northern border.

Topography, Geology and Hydrology

Soils

The following soil types can be found on this tract: Belknap silt loam (Bg), two Gilpin silt loams (GnE, GnE3), Wellston silt loam (WeE), three Zanesville silt loams (ZaB, ZaC3, ZaD3) and Steff silt loam (Sf).

Belknap silt loam (Bg) is frequently flooded. It is a nearly level somewhat poorly drained soil on the flood plains. This soil type is found in the southwest corner of the tract surrounding the drainage of this area. It has a site index of 90 (Yellow poplar).

Gilpin silt loam (GnE) is found on 15 – 30% slopes and is a moderately deep soil found on well-drained side slopes. There is fractured sandstone bedrock at 35 inches. It has low available water capacity and moderate permeability. Within this tract, it surrounds the four sets of drainages running along the west side of the tract. It has a site index 80.

Gilpin silt loam (GnE3) is found on 15-25% slopes and is severely eroded. It is strongly sloping and moderately deep and well drained. It is commonly found on narrow side slopes. There is sandstone bedrock at 29 inches. In this tract, this soil type is found in the northern half of the tract at the heads of the two drainages and above Hog Branch on the side slopes. It has a site index of 80.

Zanesville silt loam (ZaB) is found on 2-6% slopes, it is deep, moderately well drained soil. Erosion is a major hazard. Sandstone bedrock begins at 78 inches. The soil has a fragipan at 24-32 inches and has moderate permeability above and slow permeability within. This soil is found on the seven ridgetops extending into the tract from the east. It has a site index of 68.

Zanesville silt loam (ZaC3) is found on 6-12% slopes and is severely erode. It is a moderately well drained soil on side slopes. This soil's fragipan is a t two feet and has a moderate permeability above it. This soil forms some of the side slopes of the many ridge fingers. It has a site index of 60.

Zanesville silt loam (ZaD#) is found on 12-18% slopes and is severely eroded. It is a strongly sloping soil that is deep and moderately well drained soil. It has a fragipan at 2 feet and has moderate permeability above and slow within. This soil is only found in small amounts within this tract. It is found just below the ridge fingers and above the drainages. It has a site index of 60.

Steff silt loam (Sf) is frequently flooded. This is a nearly level, deep, moderately well drained soil on flood plains. Available water capacity is high and permeability is moderate. This soil is found in this tract along and around Hog Branch. It has a site index of 80.

Access

Roads border this tract on two sides. On the north side, State Road 364 borders the land and on the east side it is bordered by county road 650 east. The ridgetops along the east side provide excellent access to the majority of the tract. A firelane also covers most of the northern part of the tract.

Boundary

State Road 364 forms the northern boundary of this tract. County Road 650 forms the eastern boundary and loops around to the west to form the far southern boundary as well. The far western boundary is marked by an old fence row. The rest of the western boundary is marked by fence remnants.

Wildlife

Wildlife noted on this tract was deer, crows, squirrels, and box turtles.

A search of the Natural Heritage Database was dated 6/15/09. If any ETR species were noted, the plan of activities for this tract took those into consideration.

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"+ size class but does not meet the guidelines within the 20"+ size class. Within this larger size class 50 additional trees are needed to meet the requirements. The best way to achieve this is to allow pres-selected trees that are close to the size requirement the time needed to mature to this size.

This tract meets the snag requirements for the 5"+ and 9"+ size groups. It does not meet the requirements for the 19"+ size group. To meet the requirement 33 more snags are needed. This is easily done by girdling trees that are appropriate to reach this goal. These trees could be culls or lower valued species.

Communities

Of the forested area of this tract there are three different forest types; mixed pine, oak/hickory, and yellow poplar/mixed hardwoods.

The pine is a mix of Virginia, White, and Red Pine and there are a couple of pockets of it on the southern and far northern portions of this tract. The rest of the forested area consists of about equal portions of oak/hickory and yellow poplar/mixed hardwoods.

There are some invasive species present on this tract. Montiflora rose and honeysuckle are especially prolific on this tract. These species are most abundant on the southern half of the tract but are present throughout the site. Black locust was noted on the very southern end of the tract but it is not a problem at this point.

Recreation

No sign of recreational activities is present on this site. It is easily accessible to the public from Road 650. Deer and turkey hunting are recreational possibilities on this site. Further recreational opportunities include 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

The highest value of timber on this tract is the northern portion and consists of approximately 82 acres. This area is ready for a harvest. There are many overmature trees that will be dead by the next inventory if they are not harvested. These should be taken during the harvest to help ensure that the value of these trees is not lost. Poorly formed and less desired trees can be taken too. In addition to this, the pockets of pine in the northern portion of the tract could be considered for regenerational openings (the pockets of overmature pine on the southern portion of this tract could be assessed for regenerational openings during the harvest as well). Much of the pine present is either stagnated or declining. This will encourage hardwood regeneration and by performing TSI a year after harvesting, species like oak can be favored. The western border should be marked before harvesting.

There is a small area of non-commercial forest around the residence located in roughly the center of the property. It is an area of about 4 acres that would be left for aesthetic purposes.

The rest of the tract is not ready for a harvest at this time. This area consists of about 66 acres and is almost the whole southern half of the tract. It is recommended that this area is treated for invasive plants. There are some areas of very dense Montiflora rose and honeysuckle present. These should be treated as TSI is recommended in this area and if left untreated the invasive plants will just spread further once the canopy is opened. Another reason to control these exotic plants is that there are areas where the invasive species are so thick that they will impede tree regeneration. After the invasives are treated TSI should be performed on this portion of the tract. Pole sized stands can be thinned and undesired trees can be taken or killed. Trees with poor form, low value, over maturity, and disease can be removed from the stand to improve the conditions for the desired trees. Any grapevines present can be killed at this time as well. The pockets of pine in this area can be considered for harvesting during the harvest of the northern portion of the tract. These areas could be used as regenerational openings. Yellow poplar is moving into the gaps created by dying white pine. There is some oak regeneration present within the gaps of the pine stands as well. These stagnated pine stands could be transitioned to mixed hardwood stands.

Summary Tract Silvicultural Prescription and Proposed Activities

2010 – Mark western boundary

2010 – Treat invasive species

2011 – Selective harvest on northern 82 acres

2012 – TSI of entire tract, including grapevine control

2022 – Oak/hardwood regeneration evaluation in harvested area

2029 – Inventory

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