Indiana Department of Natural Resources - Division of Forestry

Resource Management Guide
Compartment 01 Tract 04

Ferdinand State Forest June 20, 2010
Amanda Bradshaw-Burks
Site Index: 79

Location: This tract is located at W ½ NW ¼ Section 6 T3S R3W Jackson Township, Dubois County, IN. It is 2.2 miles south east of Saint Anthony, IN.

General Description: This tract covers 92 acres. It is covered in it's entirety by closed canopy forest. This forest is a mixture of hardwood and pine. There is no direct access to this land as it is land locked by private landowners. Despite this, County Road 600 E runs fairly close to this road so if the landowner is amicable access to this tract may not be that difficult.

History: This tract was purchased from Sylvester B. Fleig for the sum of $1.00 on December 19, 1940 and the deed describes 86.4 acres.

It appears that several areas were cropped (a strip on the east side of he main drainage in the north and a strip in the southeast) at some point in the past.

A 58 x 55 x 8 ft. deep waterhole was constructed in the southern corner of the tract in 1964 on a Pittman-Robertson project.

An inventory was done in 1970 by Bill Hahn when the tract was formerly split into two pieces of land. He found 2,400 bd ft per acre with a BA of 54 and 1,600 bd per acre with a BA of 68 within the hardwoods of the tract. He recommended some limited TSI and a crop tree release thinning in the white and black oak, hickory, and poplar as well as thinning the stagnated pine stands.

A small hardwood timber sale on 30 acres (680 bd. ft per acres) was marked by Ben Hubbard in 1974 and sold to Karl Fehribach (20,456 bd. ft in 128 trees for $.08 per bd. ft). Most of the volume was in 16 to 22 inch white and black oak, poplar, and pignut hickory. Post-harvest TSI was performed.

The tract was inventoried again in 1983 by Janet Eger. She found about 3,000 bd ft per acre and basal area of 79 in the hardwoods. She recommended a thinning or removal of the pine east of the main drainage at any time in addition to the hardwood harvest in 1994. A 2 to 3 acre opening was created during the harvest on the west white oak slope in the northeast portion of the tract. She also recommended releasing the young poplars in the southwest corner which were partially released in 1974-75 harvest.

An inventory was done in 1996 by John Zvirblis where a timber sale of 90,000 bd. ft over 30 acres was recommended. This harvest was never done.

Landscape Context: This tract is land-locked. The surrounding land is privately owned and the vast majority of it is wooded land with residential houses build on it.

Topography, Geology and Hydrology:
There is an unnamed waterway that bisects this tract that runs south/north. The water runs north and empties into Flat Creek. At the time of the inventory there was water present in the waterway. This was done during an unusually dry time so it is a safe assumption that there is water present in this waterway for most of the year.

The topography is typical of the area and consists of rolling hills.

Two sinkholes were noted in previous inventories in the northwest portion of the tract.

Soils:

Gilpin Silt Loam (GlD3) severely eroded- This strongly sloping soil is moderately deep and well drained. The soil is on uplands. It is on 12-18% side slopes along drainageways. Rock outcrops are in some areas. Inclusions of other soils make up about 15-20 percent of the soil. The soil has a low available water capacity and is moderately permeable. Surface runoff is very rapid. The surface layer has low organic matter content and is friable. This soil is in capability subclass of VIe, a woodland suitability subclass of 2r and a site index of 80.

Zanesville Silt Loam (ZnC2), 6 to 12 percent slopes, eroded-This moderately sloping soil is deep and well drained. This soil is on uplands. It is on ridgetops and upper parts of side slopes along natural drainageways. This unit includes eroded and uneroded soils. This soil has moderate available water capacity and is slowly permeable. Surface runoff is medium. The surface layer has moderate organic matter content and is friable. Depth to a seasonal high water table ranges from 2 to 3 feet during the months of December through April. A very firm and brittle fragipan at 24 to 32 inches, restricts the downward movement of roots. The soil is in capability subclass IIIe and woodland suitability subclass 3o and a site index of 68.

Gilpin Silt Loam (GlE), 18-25% slopes- This moderately steep soil is moderately deep and well drained. This soil is on uplands. It is on hillsides and sharp breaks along drainage ways. Inclusions of other soils make up 10-12 percent of the soil and can include rock outcrops. The soil has low available water capacity and is moderately permeable. Surface runoff is rapid. The surface layer has moderate organic matter content and is friable. The soil is in capability subclass Vle, a woodland suitability subclass of 2r and a site index of 80.

Gilpin-Berks complex, (GoF), 20-50% slopes-This soil consists of moderately steep to very steep Gilpin and Berks soils that are moderately deep and well drained. These soils

are on hillsides and are in the uplands. Individual areas of this soil are 50 percent Gilpin soils and about 35 percent Berks soils. The soils in this unit have low available water capacity and are moderately permeable. Surface runoff is very rapid. The surface layer has moderate organic matter content and is friable. The complex is in capability subclass of Vlle, while the Gilpin part is in woodland suitability subclass 2r and the Berks part is in woodland suitability subclass of 3f. The complex has a site index of 80.
Gilpin Silt Loam (GlD2), 12 to 18% slopes eroded- This strongly sloping soil is moderately deep and well drained. It is found on side slopes along drainage ways and hillsides. This soil has low available water capacity and is moderately permeable. Surface runoff is rapid. The surface layer has moderate organic matter content and is friable. The soil is in capability subclass IVe and woodland suitability subclass of 2r and a site index of 80.

Gilpin Silt Loam (GlE3), 18 to 25% slopes, severely eroded- This moderately steep soil is moderately deep and well drained. The soil is on uplands. It is on hillsides and sharp breaks along drainage ways. Inclusions of other soils make up about 10-20 percent of the soil and can include bedrock outcrops in some areas. This soil has low available water capacity and is moderately permeable. Surface water runoff is very rapid. The surface layer has low organic matter content and is friable and easily erosive. The soil is in capability subclass of VIe, a woodland suitability subclass of 2r and a site index of 80.

Access: As stated earlier this track is land-locked; however, the landowners to the east of it have accommodated the DoF in order to access the land for management purposes.

Boundary:
There are cornerstones present on the northeast and northwest corners. These were put in by the county surveyor. The northern boundary is marked by pink ribbon and orange paint. The eastern boundary was also marked by the county surveyor. This is evidenced by signs and metal posts.

Wildlife:
This tract likely supports wildlife typical of the area. Animals witnessed include turkeys, white tail deer, toads, frogs, lizards, song birds, crows, and squirrels.

A search of the Natural Heritage Database didn't reveal any rare, threatened, or endangered species on this tract. However, some species of concern have been noted close to this tract.

A small water hole was constructed in the southeast corner of this tract in 1964. This is a water source for wildlife.

A search of the Natural Heritage Database was dated 6/23/2010. If any endangered, threatened, or rare species were noted, the plan of activities for this tract took those into consideration.

Communities:
Invasive species noted on this tract are honeysuckle and multiflora rose. The infestation is in varying degrees across the tract. The honeysuckle is worse in previously disturbed areas. The multiflora rose is present sparsely over much of the tract.

Recreation:
Because this tract is land locked there is likely little to no recreation on it outside of the immediate neighbors. Two deer stands that are currently in use were found during the inventory on this tract. Both are temporary stands but have obviously been there for a while and are not tagged. Recreation possibilities include hunting, bird watching, hiking, and non-timber forest product harvesting by the neighboring landowners or persons who have their permission to cross their land.

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:
There is a wide range of timber types on this tract.

Oak/Hickory: Oak hickory is present along the northern half of the eastern boundary, in the north west corner, and in the south west corner of this tract. The dominate species present are white oak, pignut hickory, and black oak. Much of the black oak is overmature and in decline. Where there is white oak it has good form. In some areas there is some white oak mortality present but it is scattered and isn't abundant. The crop trees in these areas should be released with a harvest. Also, oak regeneration should be encouraged. The oak/hickory areas, as with the rest of the tract, have some pine mixed in with the hardwoods. The number of pine trees is relatively low but they should be removed to release the more desirable species present.

Mixed Hardwood: This cover type dominates the northern half of this tract and part of the southern portion. The dominate species are yellow poplar, red maple, and sugar maple. Much of this area has a heavy pine component to it. Much of the pine is declining and/or stagnated. This is evidenced by heavy mortality and blow down. There are many yellow poplar trees present that are over mature and/or stressed as is true in many areas. These large trees should be removed as they will likely not make it to the next harvest. There are also some higher valued species present in these areas. White oak, black oak, and hickories are interspersed and should be released as crop trees with a harvest. All the pine should be removed as well. The area around the stream that runs north/south in the center of the tract is surrounded by bottomland hardwood species. This includes sycamore, green ash, and river birch. The mixed hardwood area in the southern portion of the tract contains very good competitive oak regeneration present at this time. A harvest will work to release these trees and thusly keep oak as a component in the future stand. This can be further encouraged by having a post harvest TSI cut.

Yellow Poplar: This cover type is present in a small portion of the middle of the tract. Along with the yellow poplar there is sugar maple, red maple, and pine present. There is

a small area in the southern portion of the north east corner of this tract where the pine has all died and it has created an opening that is dominated by Yellow Poplar saplings. Over the area of yellow poplar the crop trees should be released with a timber harvest. The large, over mature yellow poplars should be taken out to help released the desired trees. Oak regeneration should be encouraged where suitable. A post harvest TSI cut will help to further release the desired trees.

Pine: Pine is present over the majority of this tract. There are some small pure stands present sporadically but the majority of it is mixed in with hardwood species. There is pitch pine, white pine, and shortleaf pine present. The vast majority of it is in decline and/or stagnated. The pine should be harvested to release the more desirable species. In many areas under the pine there is competitive oak regeneration. If the pine is removed now the oak regeneration will be able to respond to the release and stands a good shot of making into the canopy eventually.

There is a small area of pure black walnut present in the center of the eastern border. The trees are sapling to small pole sized and have moderate to poor form. While there are a few black walnut trees scattered over the tract, this stand is not typical on this land. These walnut trees should be left to mature as a source of high value timber and a seed source.

Overall, the competitive oak regeneration on this tract is very good. With diligence it is very feasible for it to mature into the canopy.

Proposed Activities Listing:

2011: Timber harvest of approximately 257,000 board feet of Pine and hardwood over the entirety of the tract.

2012: Post harvest TSI

2021: Evaluate pine openings for thinning and vine control

2030: Inventory

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