Resource Management Guide

Harrison-Crawford State Forest **Compartment: 9 Tract: 3**
Christine Martin **Date 3/6/08**

Acres Commercial forest: 60
Acres Noncommercial Forest: 0
Acres Permanent Openings: 0
Acres Other: 0

Basal Area ≥ 14 inches DBH: 73
Basal Area < 14 inches DBH: 21
Basal Area Culls: 4
Total Basal Area: 98 sq.ft.of basal area/ acre

Acres Total: 60

Average Site Index: 69
Calculated annual Growth (bd. ft.): 258 bd ft/acre

Location

This tract is located in Crawford County, T3SR2ES18.

General Description

There are two main stand types on this tract of land. There is the Oak-Hickory which is 11 acres in size, and the Mixed Hardwoods portion which is 49 acres in size. The Oak-Hickory is mainly centered on the ridge top on the northern portion of the tract.

History

Bye sold us the eastern 40 acres in 1937 and the western 20 acres in 1947.

Landscape Context

The surrounding area is all in privately forested land. It seems that all the landowners have all had timber sales on there property at some point in the past 50 years.

Topography, Geology, and Hydrology

There are mainly east and west facing slopes on this tract. Jordan Creek runs through this tract and there is a secondary drainage also located on this tract which drains into Jordan Creek.

Soils

Adyeville Very Fine Sandy Laom (AbqE2, AciE)

The Adyeville series consists of moderately deep, somewhat excessively drained soils. Surface Horizon is 9 inches thick. The subsurface horizon then grades into 8 inches of silt loam then with the remaining 60 inches turns into a loam texture type soil. The bedrock consists of moderately cemented sandstone with some siltstone, and shale. The permeability is moderately rapid. The mean annual precipitation is about 43 inches and the mean annual temperature is about 54 degrees F.
Degree Slope: 8-60%
Woodland suitability group: 3o10

Site Index: 70
Growth Range potential: 200
Management Concerns: Runoff and erosion

Apalonia Silt Loam (AgrA. AgrB, AgrC2, AgrC3)

The Apalonia series consists of very deep, moderately well drained soils formed in loess and the underlying residuum from shale with limestone and siltstone. They are moderately deep or shallow to a fragipan. The surface horizon is a silt loam 8 inches thick. The first 8 inches of the subsoil is a silty clay loam. The next 33 inches is a silt loam. The next 11 inches is clay then it turns into a clay loam for 9 inches. The last 21 inches of the subsoil is a loam. The bedrock is weakly cemented shale with moderately and strongly cemented sandstone. The mean annual precipitation is about 43 inches and the mean annual temperature is about 54 degrees F.
Degree Slope: 0-12%
Woodland suitability group: 3d9
Site Index: 60
Growth Range potential: 258
Management Concerns: runoff and erosion

Gatchel Loam (GacAW)

The Gatchel series consists of very deep, somewhat excessively drained soils on flood plains. They formed in loamy alluvium containing a high percentage of rock fragments in the lower part. The surface horizon is a loam that is 4 inches thick. The first 5 inches of the subsoil is loam, the next 9 inches is a fine sandy loam. The substratum is a coarse sandy loam turning into a sandy loam. Mean annual precipitation is about 43 inches and mean annual temperature is about 54 degrees F.
Degree Slope: 0-2%
Woodland Suitability: 1o8
Site Index: 60
Growth Range potential: 155
Management Concerns: runoff and erosion

Tipsaw Very Fine Sandy Loam (TbIG)

The Tipsaw series consists of moderately deep, somewhat excessively drained soils. They formed in loamy residuum from sandstone with shale and siltstone. The surface is a dark grey very fine sandy loam about 2 inches thick. The subsurface horizon is also a very fine sandy loam about 3 inches thick. The subsoil is 15 inches is a fine sand loam and the last 20 inches is a loam. The bedrock consist of a weakly cemented and moderately cemented sandstone with shale, siltstone. The mean annual precipitation is about 43 inches, and mean annual temperature is about 54 degrees F. Permeability is moderate or moderately rapid
Degree Slope: 20-70%
Woodland Suitability: 3r12
Site Index: 70
Growth Range potential: 342

Management Concerns: runoff and erosion

Wellston Silt Loam (WhfC2, WhfD2, WhfD3)

The Wellston series consists of deep, or very deep, well drained soils formed in silty material from loess and from fine-grained sandstone or siltstone and with bedrock at depths of 40 to 72 inches. These soils have moderate permeability. The surface horizon is a silt loam which is 2 inches thick. The subsurface horizon is a silt loam about 8 inches thick. The first portion of the subsoil consists of 11 inches of a silt loam, the next portion consist of 4 inches of a silty clay loam. The last portion of the subsoil is one inch of a clay. The stratum is 9 inches of loam. The bedrock which is at 45 inches form the surface is an acid fine-grained sandstone. Mean annual precipitation is about 40 inches, and mean annual temperature is about 53 degrees F. Well drained. Runoff is medium to rapid.
Degree Slope: 0-50%
Woodland suitability group: 3o10
Site Index: 80
Growth Range potential: 342
Management Concerns: runoff and erosion

Access

There is no legal access to this tract. The tract is land locked within private ownership.

Boundary

This tract is surrounded on all sides by private forested land. There were two corners found on this tract. There was a corner stone found at the northeast corner, and the southern most southwest corner. There were some scraps of barbed wire fence found in the western most south west corner. Alone the north line there was found an old stone pile that could have been at the edge of the field. The southern boundary was flagged in pink.

Wildlife

The wildlife is typical of what is normally found in Crawford county Indiana.

Indiana Bat

Timber harvest activities may have both positive and negative effects on the Indiana bat. While undetected but occupied roost trees could be cut during spring, summer or fall, the probability of disturbance or direct injury or death to bats is extremely small. Timber harvest could create conditions that are beneficial to Indiana bats. Roads and/or skid trails provide improved canopy foraging conditions by reducing clutter. Roosting habitat could also be improved by reducing clutter around roost trees. Edges of log landings and regeneration openings could provide roost trees with improved solar exposure, thus improving microclimate/thermal conditions for roosting areas. This would improve reproductive success and fitness, contributing to local population stability or increase. In cases of maternity trees this could provide conditions that increase growth and activity rates of young bats, leading to reduced time for parental care.

Suitable roost trees such as large diameter snags or live trees with loose or exfoliating bark will be retained in sufficient numbers to provide continuing roosting habitat for the Indiana bat

Recreation

Because this land is landlocked the only people that would be able to utilize this tract are the neighbors.

Cultural

There are no historic features found on this tract.

Tract Subdivision Description and Silvicultural Prescription

For both these stand types the square footage of basal area is around 100. If there would be a harvest on this tract it would yield around 2,000 board feet per acre according to the Doyle log rule.

Mixed Hardwoods

This stand type encompasses 49 acres of this tract. There are a variety of trees found in this stand type. The main trees found here are some white and black oaks with pignut and shagbark hickories. There also is a component of sugar maple. There are a different number of pockets of species found in different areas in this stand type. In the Northeastern corner there is a pocket of yellow poplar. The poplars vary in sizes from small 10inch diameter stems to 20 inch diameter stems. Another pocket is along the slope of the east line. In this pocket there is a plethora of beech. Black cherry picks up as heading southward along the east line as well. On the western side of the mixed hardwoods stand type, there are many oaks and hickories, but with a strong component of sugar maple.

On the southwestern part of the tract there is some blow down.

Oak-Hickory

This stand is 11 acres in size. There are larger mature oak trees. There are also some poor formed black oaks in this stand. These black oaks vary in size, but many are around 20 inches in diameter.

Summary Tract Silvicultural Prescription and Proposed Activities

This entire tract could use an improvement thinning on it. The tract will be thinned down to 70 square feet of basal area per acre. There will also be some regeneration openings created to maintain tree, and wildlife diversity in the tract.

In spots there are numerous trees with unhealthy crowns. These trees should be removed to benefit the overall health of the stand. By thinning this stand will also be releasing the younger more vigorous trees. Overall an improvement thinning is what this stand needs in order to promote the longevity of the site.

Proposed Activities Listing

2009- If access is gained perform a timber harvest, thinning the stand to 70 square feet of basal area/ acre.
2010/11- Post Harvest TSI performed.
2029- Reassess the tract, and perform another management guide and inventory.

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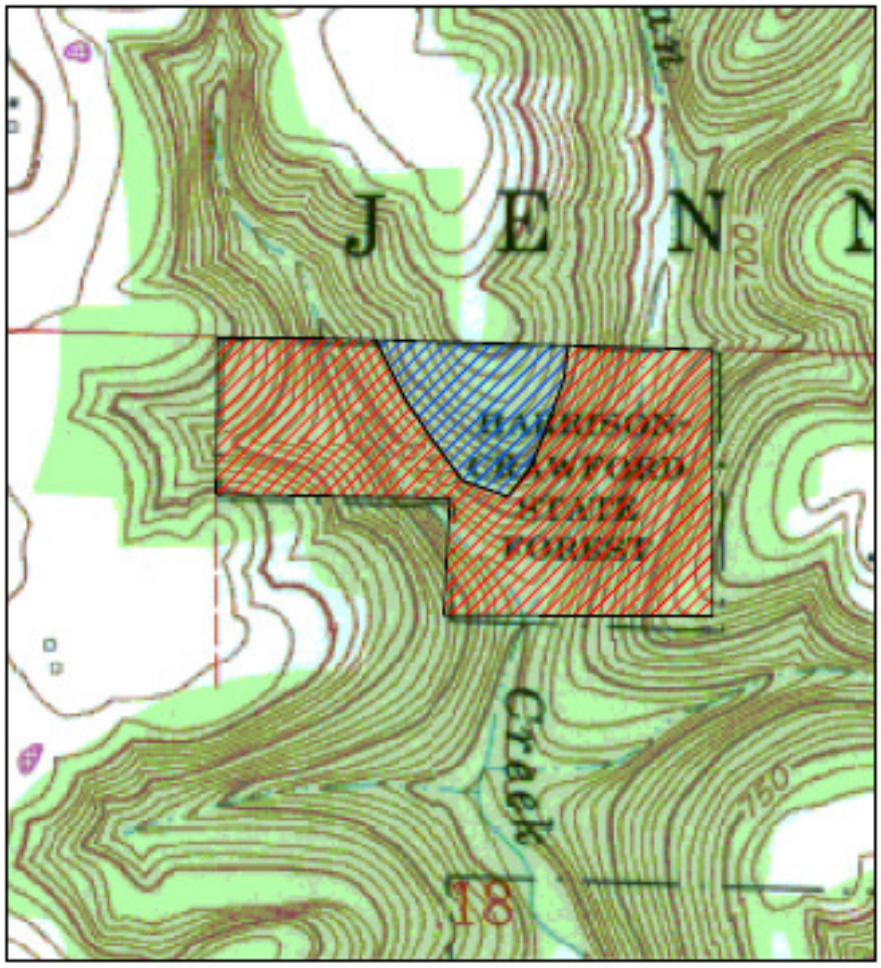
Compartment 9 Tract 3
T3S R2E S18
Stand Map



Stand Types

- Mixed Hardwoods
- Oak-Hickory