Indiana Department of Natural Resources – Division of Forestry
DRAFT
RESOURCE MANAGEMENT GUIDE

State Forest: Jackson-Washington Compartment: 12 Tract: 4
Forester: Sandy Derringer Date: 4/7/2015
Management Cycle End Year: 2038 Management Cycle Length: 20 years

Location

This tract is located in Section 19, T3N, R5E in Washington County. Nicholson Hollow road is the northern boundary of the tract. It is approximately 20 miles south of Brownstown.

General Description

This 45 acre tract is composed of 16 acres of forest land, about 4.6 acres of grassland that makes up the dam and over flow and a 21.9 acre lake known as Potters Lake. The area below the dam was planted in black walnut and red oak in 1987. The area just northwest of the lake appeared to have been an old field at one time. It contained a lot of eastern red cedar. The tract has gentle slopes on the southern end and a little steeper slopes on the northern end. It contains mostly southern facing slopes. The timber type is mainly mixed hardwoods.

History

This tract of land was acquired from Mack M. Potter and Lena Ruth Potter on August 4, 1967. Most of the land had been used for crop land with most of it planted to trees by the mid 70's. The area below the dam was planted to black walnut and red oak in 1987 and replanted with walnut, red oak and shumard oak in the existing plantation in 1988. The walnut and red oak was thinned in 1996. The walnut and shumard oak were thinned in 2003. The red oak was thinned again in 2004 and the last time the walnut was thinned was in 2007. Treatment for multiflora rose was performed in 2004, but it is still present.

Landscape Context

Most of the area surrounding this tract is forested both private and state. There are a few scattered residential homes. A few pastures are located on Nicholson Hollow road where it turns west from the tract.

Topography, Geology and Hydrology

This tract is a gently sloping tract which gets a little steeper at the north end. Potter Lake composes about 21.9 acres of the tract. There is one mapped intermittent stream that runs from the northeast, south to the lake on the southern end of the tract. The bedrock for this area is sandstone.

Soils

Berks-Weikert complex (BhF) This soil series is steep to very steep, well drained soils are on side slopes in the upland areas. The Berks soil is moderately deep, and the Weikert soil is shallow. The two soils occur as areas so intricately mixed that mapping them

separately is not practical. This soil complex is suited for trees. The erosion hazard, the equipment limitations, seedling mortality, windthrow hazard, and plant competition are concerns in managing the woods. Locating logging roads, skid trails, and landings on gentle grades and removing water with water bars, culverts, and drop structures help to control erosion. The site indexes for hardwood species range from 50 (black oak) to 70 (white oak). Preferred trees to manage for are black oak, chestnut oak, scarlet oak, red oak, and white oak.

Burnside silt loam (Bu) This series consists of deep, well drained soils that formed in 30 to 61 centimeters (12 to 24 inches) of medium-textured alluvium and the underlying loamy-skeletal alluvium. These soils are on flood plains and alluvial fans. It is occasionally flooded for brief periods in the spring. Native vegetation is deciduous hardwoods. This soil is well suited for trees. Plant competition is moderate. Seedlings survive and grow well if competing vegetation is controlled by cutting, girdling, or spraying. The site index for hardwood species is 95 for yellow-poplar. Preferred trees to manage for are bitternut hickory, white oak, red oak, black walnut, and yellow-poplar.

Cuba silt loam, occasionally flooded (Cw) This series consists of nearly level, well drained soils on flood plains that formed in acid, silty alluvium. These soils occasionally flood for brief periods in the spring. Slope ranges from 0 to 2 percent. The soil is moderately permeable with very high available water capacity. Runoff is slow. This soil is well suited to trees. No major hazards or limitations affect planting or harvesting. The site indexes for hardwood species is 100. Preferred trees to manage for are black walnut, and yellow-poplar.

Gilpin silt loam (GID2) This strongly sloping, moderately deep, and well drained soil is on side slopes in the uplands. This soil is fairly well suited to trees. The erosion hazard, the equipment limitations, and plant competition are the main concerns in the management of wooded areas. Locating logging roads, skid trails, and landings on gentle grades and removing water with water bars, culverts, and drop structures help to control erosion. During wet periods, roads tend to be slippery and ruts form easily. Seedlings survive and grow well if competing vegetation is controlled by cutting, girdling, or spraying. The site indexes for hardwood species range from 80 (red oak) to 95 (yellow-poplar). Preferred trees to manage for are black oak, chestnut oak, scarlet oak, red oak, and white oak.

Pekin silt loam (PeA, PeB, PeC2) This soil consists of moderately well drained soils formed in silty alluvium that can have a loess mantle of up to 102 cm (40 inches). They are very deep soils that are moderately deep or shallow to a fragipan. Pekin soils are on stream terraces and on flood-plain steps. Slopes range from 0 to 12 percent. Most areas of this soil are being used to grow corn, soybeans, and small grain, mainly wheat. A few areas are used for hay and pasture or are in forest. Native vegetation is mixed hardwood forest. This soil is well suited to trees. No major hazards or limitations affect planting or harvesting trees. The site indexes for hardwood species range from 70 (white oak) to 85 (yellow-poplar). Preferred trees to manage for are bur oak, chinkapin oak, hickories, red oak, and white oak.

Access
From Brownstown, IN travel Highway 135 approximately 13 miles south to East Rooster Hill Road. Follow that road until North Delaney Park Road, proceed south on North Delaney Park Road until you reach East Nicholson Hollow Road, turn east on Nicholson Hollow Road, follow until you come to a sharp turn at which point a parking lot for Potter Lake is on the south side of the road.
This tract can be accessed from Potter Lake parking lot or Nicholson Hollow Road.

Boundary
Nicholson Hollow Road serves as the northwest tract boundary. The east boundary begins at the road and runs south down an ephemeral stream to a mapped intermittent stream at which point it follows the water edge until it reaches the lake dam. It then follows the base of the hill west over the dam until it reaches the boundary line.

Wildlife
A diverse assortment of wildlife resources are found on this tract conducive to providing habitat for a variety of wildlife species. Habitat includes:

- mixed hardwood stands with varied structure
- grasslands
- younger forests (plantations)
- open water and riparian areas

Hard mast trees such as oaks, hickories, and American beech provide food source to both game and non-game species. The openings are varied in size but all present similar, dense vegetation that favors wildlife preferring this habitat structure. Such vegetative species include sassafras, grapevine, and other early successional shrubs.

Snags (standing dead or dying trees), are an important wildlife habitat features in Indiana's forests. They are used by a wide range of species as essential habitat features for foraging activity, nest/den sites, decomposers (e.g., fungi and invertebrates), bird perching and bat roosting. Additionally, snags are an important contributor to the future pool of downed woody material. Downed woody debris provides habitat and protection for many species and contributes to healthy soils.

Forest wildlife species depend on live trees for shelter, escape cover, roosting and as a direct (e.g., mast, foliage) or indirect (e.g., foraging substrate) food resource. The retention of live trees of various diameter classes and characteristics is of particular concern to habitat specialists such as species of conservation need like the Indiana bat.

The DoF has developed compartment level guidelines for wildlife structural habitat features. The wildlife snag habitat feature summary indicates that the 5" DBH class for snags is above the maintenance level. The 9" DBH and 19" DBH classes are below the maintenance level and reflect the past history of open fields and agriculture on the tract.

The prescribed management will maintain or enhance the relative abundance of these features, including snag creation during TSI activities. Signs of beaver, deer, and squirrel were seen in the tract. Canada geese were seen on the dam and lake.

Snags (all species)	Maintenance level	Inventory	Available above Maintenance
5"+ DBH	88	757	669
9"+ DBH	66	44	-22
19"+ DBH	11	0	-11

Communities

A Natural Heritage Database review was completed for this tract. If Rare, Threatened or Endangered species (RTE's) were identified for this area, the activities prescribed in this guide will be conducted in a manner that will not threaten the viability of those species.

Forest Condition

TM 901 RESOURCE MANAGEMENT GUIDE			
INVENTORY SUMMARY			
		Compartment:	12
State Forest:	Jackson-Washington	Tract:	4
Forester:	Sandy Derringer	Inventory Date:	4/7/15

ACREAGE IN:	
Forest	16
Non-Forest	2.1
Water	21.9
Permanent Openings	4.6
Other Uses	
TOTAL AREA	44.6

(Estimated Tract Volumes for Commercial Forest Area-Bd.Ft., Doyle Rule)

SPECIES	HARVEST STOCK	GROWING STOCK	TOTAL VOLUME
White oak		17,920	17,920
Northern red oak	3,490	14,080	17,570

Pignut hickory		15,840	15,840
Chestnut oak	6,940	8,230	15,170
Black oak		14,330	14,330
Eastern White pine	2,250	9,410	11,660
Yellow poplar	2,250	8,870	11,120
Sugar maple	8,360	830	9,190
Scarlet oak	1,800	6,900	8,700
Eastern red cedar		4,860	4,860
White ash	1,710	1,470	3,180
Red maple		2,930	2,930
			0
			0
TRACT TOTALS	26,800	105,670	132,470
PER ACRE TOTALS	1,675	6,604	8,279

The inventory for this tract showed an estimated total volume of 132,470 bd. ft., a harvest volume of 26,800 bd. ft. and a leave volume of 105,670 bd. ft. The estimated current per acre tract volumes are 8,279 bd. ft. per acre total volume, 1,675 bd. ft. per acre harvest volume and 6,604 bd. ft. per acre leave volume. The top three species by volume in the harvest category are sugar maple, chestnut oak and northern red oak. The top three species in the total volume are white oak, red oak and pignut hickory. Current basal area is 79.5 sq. ft. per acre with a post harvest basal area estimated at 67.7 sq. ft. per acre. The dominate understory in the tract is: Sugar maple, American beech, Pignut hickory and some white and scarlet oak.

Recreation
Potter Lake is the main recreation in this tract. It is a 21.9 acre fishing lake. Hunting and collecting mushrooms are other activities that might be performed in this tract.

Cultural
Cultural resources may be present but their location(s) are protected. Adverse impacts to significant cultural resources noted will be avoided during management or construction activities.

Tract Subdivision Description and Prescription
Lake – Potters Lake makes up 21.9 acres of the tract.

Grass – This area makes up approximately 4.6 acres and comprises the dam for the lake and emergency spillway of Potters Lake. The maintenance of the dam, emergency spillway and water level risers are the responsibility of the Delaney Creek Watershed District. Residences within the watershed district are taxed for routine maintenance of these impoundments within the district.

Plantations – This area is about 2.1 acres. It was originally planted with Black Walnut on half and Red oak on the south side of the creek. The area now has mostly 4-8" trees

with red cedar and multiflora rose growing in the understory. The multi flora rose should be monitored.

Mixed Hardwood (10.2 acres)– This area is leaning towards being more oak hickory but has Sugar maple and yellow poplar mixed in. This area is in the northern end of the tract running from the road to the ephemeral. The over story consists of white oak, chestnut oak, red oak, black oak, pignut hickory, sugar maple and yellow poplar. There are scattered large trees some white oak. Some areas contain trees that are low quality and have butt rot. Under story consists of sugar maple, American beech, white oak, black oak, pignut hickory and shagbark hickory. Regeneration is composed of the same with white ash being present also. The management prescription for this tract would be to implement an improvement harvest utilizing single tree and group selection openings. The single tree selection will focus on the removal of poor quality, competing and over mature trees to release the healthy more vigorous trees present. This will provide more sunlight and nutrients to enhance the development of the forest that remains. Much of the white ash should be removed due to Emerald ash borer infestation and to recruit ash regeneration before seed bearing trees are lost to EAB induced mortality. Within the regeneration openings species likely to occur in the years following removal of overstory and completion of openings via post-harvest TSI are the following: sugar maple, American beech, white ash and red oak.

Mixed Hardwood – Old Field (5.8 acres) – This was an open field at one time and has a lot of red cedar trees growing in it. Other species present in the overstory include yellow poplar, red maple, white ash and black oak. Species in the understory include red cedar, yellow poplar, American beech and black locust. Regeneration is mainly American beech and red cedar.
The management prescription for this tract would be to implement an improvement harvest utilizing single tree and group selection openings. The single tree selection will focus on the removal of poor quality, competing and over mature trees to release the healthy more vigorous trees present. The group selection will focus on the areas of red cedar and that are more open. This will provide more sunlight and nutrients to enhance the development of the forest that remains. Much of the white ash should also be removed due Emerald ash borer infestations. Within the regeneration openings species likely to occur in the years following removal of overstory and completion of openings via post-harvest TSI are the following: sugar maple, American beech and red cedar.

Tract Prescription and Proposed Activities
The management prescription for this tract is to implement an improvement harvest utilizing single tree and group selection openings. The single tree selection will focus on removal of poor quality, competing and over mature trees to release the healthy more vigorous trees present. The large low quality trees and large cedars are prescribed for removal to release the suppressed native hardwood trees. This will provide more sunlight and nutrient to enhance the development of the forest that remains. The regeneration openings will focus on the removal of areas of low quality trees and red cedar. Within the regeneration openings species likely to occur in the years following

removal of overstory and completion of openings via post-harvest TSI are the following: sugar maple, American beech, hickories, oak, red cedar, and white ash.
Best management practices will be implemented during and after the harvest to minimize impact on soil and water resources.

Follow the harvest with TSI to deaden any culls, release any future crop trees and reduce the amount of sugar maple, red cedar and American beech competing with the oak regeneration. TSI will also help raise the number of snags which is below the maintenance level. TSI can also focus on the removal of any grapevines. Multiflora rose in the area should be monitored for further spread.

Recreational use of the area and lake impacts are to be considered in the design and implementation of any resource management activities on this tract. Such considerations may include riparian and visual buffers and nuisance wildlife concerns (primarily beaver damage to water control structures).

Proposed Activities Listing

Proposed Management Activity	**Proposed Date**
Managed timber harvest	2016 – 2017
Post-harvest TSI	2018 – 2019
Regeneration monitoring > 1 acre in size	2019 – 2021
Inventory and management plan	2038

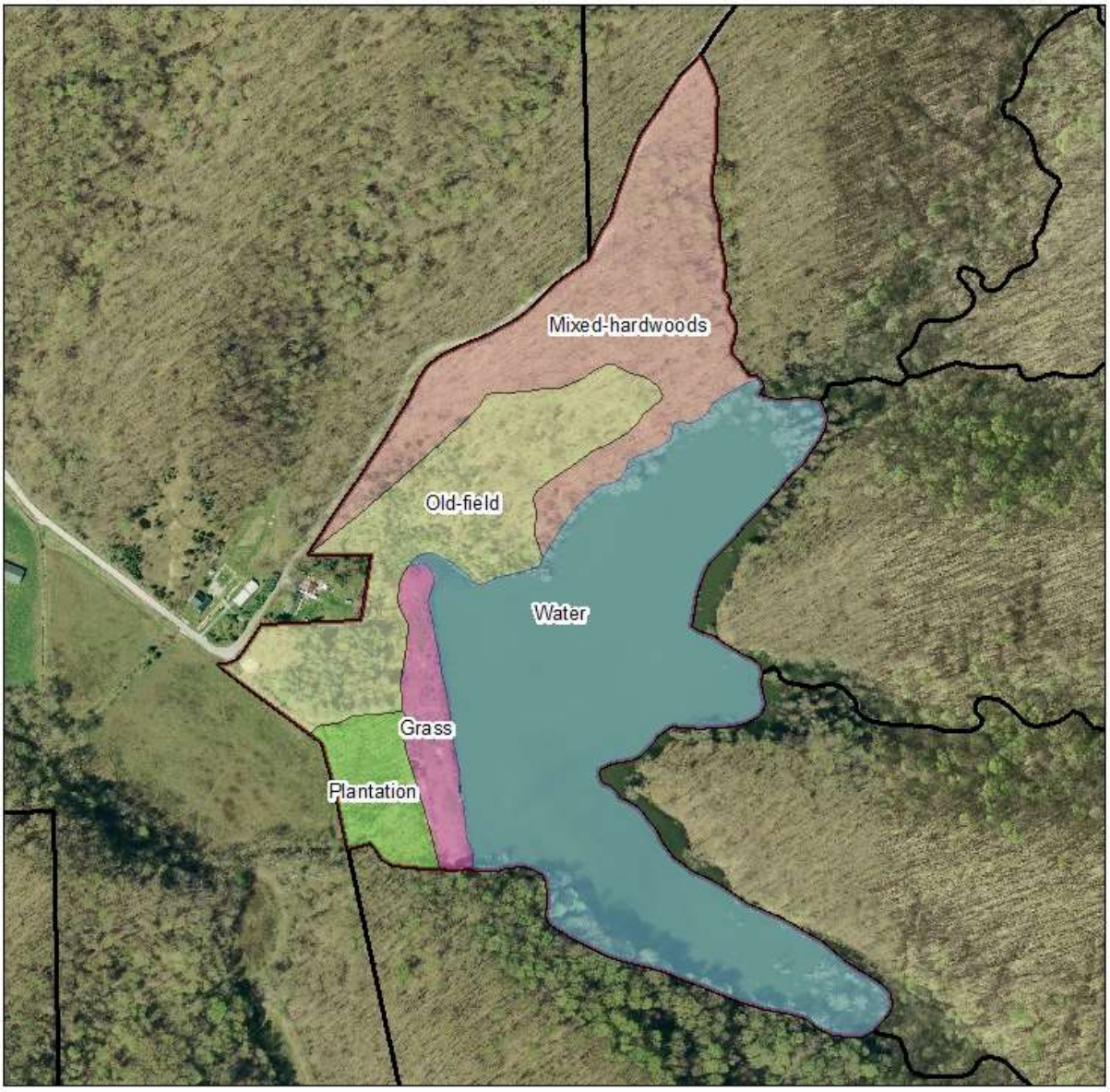
To submit a comment on this document, go to:

www.in.gov/dnr/forestry/8122.htm

You must indicate the State Forest Name, Compartment Number and Tract Number in the "Subject or file reference" line to ensure that your comment receives appropriate consideration. Comments received within 30 days of posting will be considered.

Note: Some graphics may distort due to compression.

Forest Cover Type
Compartment 12 Tract 4
Jackson-Washington State Forest



Legend

Stand_type

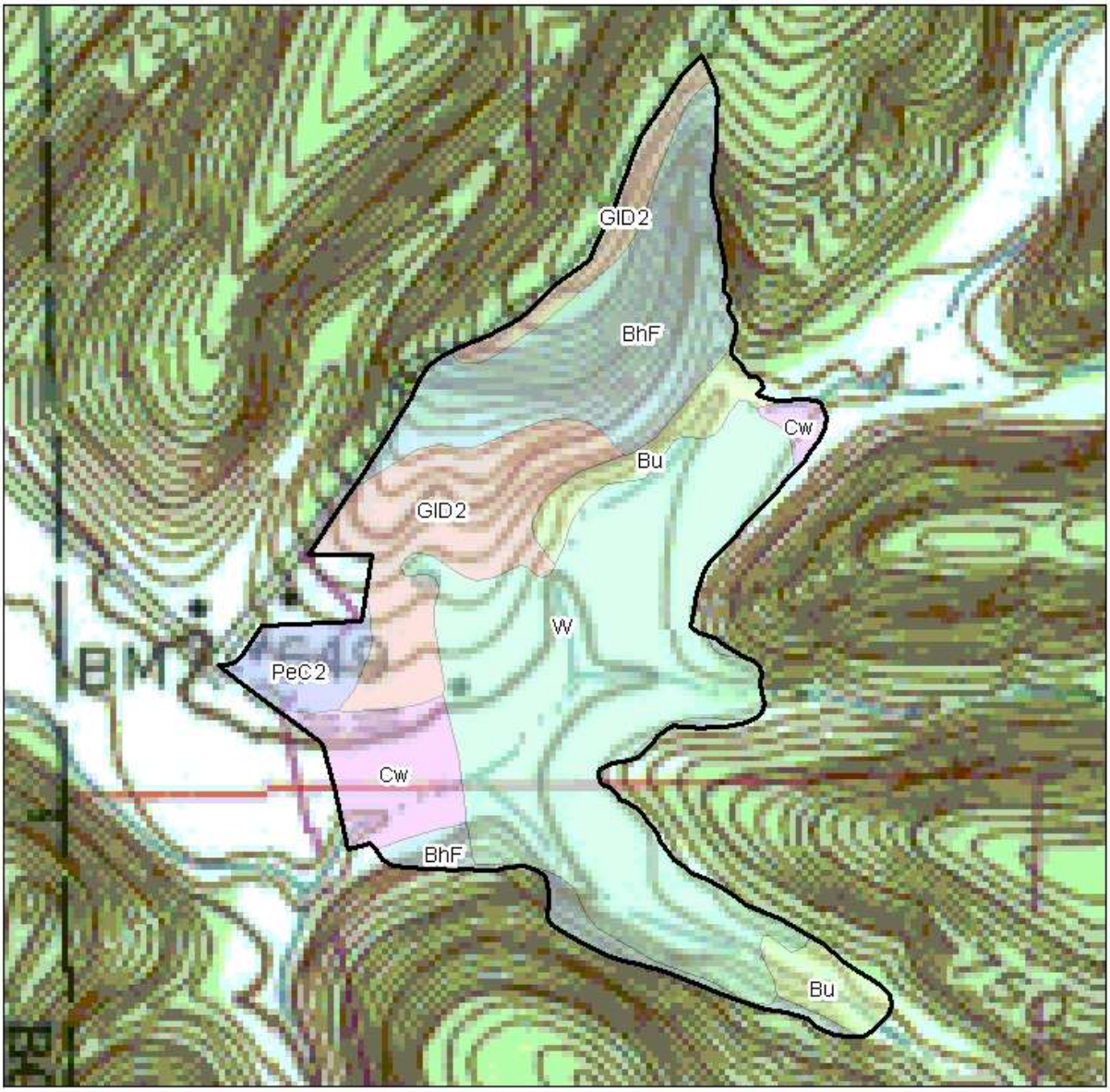
- Grass
- Mixed-hardwoods
- Old-field
- Plantation
- Water

Tract Boundary

0 165 330 660 990 1,320 Feet

N

Soils Map
Compartment 12 Tract 4
Jackson-Washington State Forest



Legend

- Tract_Boundary
- **Tract Soils**
  - BhF
  - Bu
  - Cw
  - GID2
  - PeC2
  - W

0 165 330 660 990 1,320 Feet

N