TM 903

RESOURCE MANAGEMENT GUIDE

FORESTER'S NARRATIVE

DRAFT

Jackson-Washington State Forest
Compartment 13 Tract 14
Forester: Michael Spalding
Date: July 31, 2007
Management Cycle End Year: 2020 Management Cycle Length: 13 years

Compartment 13 Tract 14 is located off of Bane Hollow Road in Gibson Township, Washington County, and is accessed by fire lane # 930. The tract is located in Sections 20, 21, 28 and 29 of T3N R5E. Access to this tract is good. Tract 14 is 74 acres and ranges from moderately steep slopes covered with chestnut oak to gentler slopes that are stocked with good to excellent quality white and red oak as well as several other species. Flat drainages and northern aspect slopes also contain mixed hardwood forest types. Access to this tract is good.

History

An inventory in 1977 indicated a total volume of 5,189 bd. ft. per acre with 2,625 bd. ft. per acre harvest stock.

Soils

Three soil types are present in this tract. Gilpin silt loam, 12 to 18 percent slopes, eroded (GlD2), is a well-drained and moderately deep soil type found on upland side slopes. Gilpin has a northern red oak site index of 80 (17.2 acres). Berks-Weikert complex, 25-75 percent slopes (Bhf), are well-drained soils that are located on upland side slopes. Throughout the range of these soils, Berks constitute about 55 percent of the range and Weikert 35 percent. The soils are so intermixed that they are not mapped separately. Berks has a northern red oak site index of 70 (28.9 acres), while Weikert has a northern red oak site index of 64 (19.3 acres). Burnside silt loam, occasionally flooded (Bu), is a deep, well-drained soil found in floodplains. Burnside has a northern red oak site index of approximately 85 (8.6 acres).

Wildlife

No endangered, rare, or threatened species were on record as having been sighted in this tract. A green frog and an eastern box turtle were both sighted during the cruise. The green frog was sited by the stream at the bottom of the tract. By following BMP guidelines, this aquatic habitat should be protected for green frogs and any other species of amphibians that may use this water source. An improvement harvest in this tract should benefit both game and non-game species through the creation of additional foraging and nesting habitat. Using both single tree and group selection provides habitat for early-, mid- and late-successional wildlife species.

Indiana Bat Management Guidelines

The following present values were determined from the inventory:

	Live trees:	**Present**	Goal	Available for Removal
Minimum	11" +dbh	762*	666*	96
	20" +dbh	324*	222 *	102
	Snags:	**Present**	Goal	
Minimum	9" +dbh	360	444	-84
	19" +dbh	126	74	52

* The present and goal only include the following Desired Live Tree Species: AME, BIH, BLA, BLL, COT, GRA, REO, POO, REE, SAS, SHH, ZSH, SHO, SIM, WHA, WHO

The minimum count for the 9" to 18" DBH snag class is below the goal. This number could be increased through TSI by deadening the appropriate number of trees to achieve the goal. Timber marking will favor retention of the live tree species preferred by the Indiana bat and minimize their removal. Release of these species in the smaller size classes will promote an increased number of these trees into larger size classes.

The nature of improvement cuttings lends itself to the known Indiana bat habitat. Removal of single trees will permit light and crown space for the residual trees. This temporary opening in the forest canopy lends itself to ease in movement for bats during flight as they capture their prey. Trees opened up to increased sunlight are able to capture the increased warmth for bats under the exfoliating bark. Regeneration openings also provide pockets within the forest canopy for bats to obtain prey while in flight. It has also been discussed that bats frequently use skid roads and haul roads as flight paths in capturing food and travel routes.

Recreation

This tract is utilized for hunting as well as hiking. A portion of the Knobstone trail runs through the eastern end of this tract and will need to be rerouted during any harvesting activities. The original path of the trail may be re-opened following the completion of the timber harvest.

Tract Area Prescriptions

Section 1 – Old field pine and yellow-poplar

The basal area in this section is approximately 110 sq. ft. per acre. This area is an old field that was planted with Virginia and white pine. Yellow-poplar naturally regenerated and is very common throughout. The timber ranges from pole to small sawtimber in size. Currently this area does not seem to justify a timber harvest, although a closer examination will be given during marking the sale. The understory is regenerating primarily to American beech.

Section 2 – beech-maple

The basal area in this section is approximately 113 sq. ft. per acre. This forest type primarily runs along an intermittent stream valley. While American beech and sugar maple are the two most common overstory trees, yellow-poplar, white oak, black walnut, and elm can all be found

in this section. Towards the northwest end of this section, the timber is larger and more mature than farther down the valley. This is likely due to a past history of either crop production or heavier grazing towards the southeast end. Current forest management in this section should focus on thinning the overstory to promote healthy, vigorous future crop trees. Timber stand improvement should follow the harvest to remove grape vines and to release any future crop trees that were not released during the harvest operation. Due to the richer soils, the understory is dominated by plants such as pawpaw, spicebush, and ironwood.

Section 3 – Old pasture

The basal area in this section is approximately 110 sq. ft. per acre. This area was likely an old pasture and contains widely scattered large trees with much younger trees surrounding them. The large scattered trees all have some type of damage, suggesting that the area was grazed very heavily. The larger trees are generally oak or hickory, with the remaining trees being a mix of yellow-poplar, largetooth aspen, sugar maple, and elm. A harvest should be utilized to harvest the scattered, large damaged trees to release the younger healthier trees surrounding them. TSI should follow the harvest to further release the future crop trees and to remove any grape vines. The understory is dominated by beech and sugar maple.

Section 4 – Oak/hickory

The basal area of this section is approximately 122 sq. ft. per acre. The species mix throughout this section is fairly consistently the following species: pignut hickory, red oak, white oak, scarlet oak, black oak, and chestnut oak. The size of the timber generally ranges from small sawtimber to large sawtimber. Some plots contained very large, high quality trees, while others contained medium-sized sawtimber. An area near the west end featured mostly large, open-grown trees and appears to be ready for a regeneration opening. Other than that area, most of this timber type needs a single-tree thinning harvest followed by timber stand improvement. Red maple, American beech, sugar maple, and sassafras are the most commonly regenerating species in this area.

Section 5 – Chestnut oak

The basal area in this section is approximately 108 sq. ft. per acre. This section is dominated by chestnut oak with white oak and pignut hickory scattered throughout. As with many chestnut oak stands, the trees are generally short due to the poor soils; however, much of the chestnut oak is above average quality for the site and species. Much of the overstory is overstocked and should be thinned to promote healthier future crop trees. Harvesting should focus on removing the damaged and defective trees while managing for those healthier trees. Timber stand improvement should be performed after the harvest to deadened competitive submerchantable trees and those trees not taken during the harvest that are competing with future crop trees. Much of the understory in this section contains sassafras, red maple, beech, and some black oak.

OVERALL

The inventory conducted in July 2007 suggests that this tract contains a total of approximately 8,113 board feet per acre, with 2,902 board feet of that available for harvest and 5,211 board feet per acre to be left. The total harvest volume for this tract could be approximately 214,770 board feet.

The overall recommendation for this tract is to conduct an improvement harvest using single tree and group selection. This harvest should be marked to be sold in the 2009 fiscal year, and should be sold with Compartment 13 Tract 13. See the plan for Tract 13 for more details about that tract. Timber stand improvement should follow within a year of completion of the harvest. As mentioned above, areas that contains primarily mature timber or are understocked may be suitable for regeneration group selection openings. Timber Stand Improvement will be needed to complete the regeneration openings, to deaden cull trees, and to release any future crop trees which were not released during the harvesting operation. By deadening cull trees which were not harvested, we can create snags in both size classes required by the Indiana bat, thus promoting their potential habitat. Also, white oak will be a very important component of future crop trees beyond the next harvest cycle. By selecting for vigorous, healthy white oak, we can also ensure that we are providing large trees of a preferred species for the Indiana bat. The marking objective is to remove mature/over-mature stems, low quality stems, damaged and defective stems, and stems of less desire in an effort to improve the overall health, vigor, and composition of the stand. The reduced stocking level will provide ample space for pre-selected crop trees to move forward into the next cutting cycle. A healthier, more vigorous stand with good species composition will be less susceptible to insect and disease infestation, a common problem with unhealthy stands. These management techniques will improve the overall health, vigor and quality of the residual stand, while capitalizing on stems dropping out due to natural mortality from overstocking and maturity.

Wildlife will benefit from this harvest as well. Additional sunlight penetrating the forest floor will stimulate the development of new ground flora, subsequently increasing nesting and foraging habitat. This is essential for game and non-game species as well as continued forest development. TSI can increase snag per acre while diversifying diameter distributions of both snags and growing stock trees.

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SPECIFIC PRACTICES FOR ACCOMPLISHMENT

(tree planting, TSI, harvest, special product sales, wildlife work, erosion control, unique areas, recreation, etc.)

Jackson-Washington State Forest
Compartment 13 Tract 14
Date: July 27, 2007

Year Planned	Practice	Year Accomplished
2008	Mark and Sell Timber	
2009-2011	Post-harvest TSI	
2020	Inventory and Management Guide	

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6351314 Tract Prescription Map