

**Resource Management Guides
Jackson-Washington State Forest
30-day Public Comment Period**

The Indiana State Forest system consists of approximately 158,000 acres of primarily forested land. These lands are managed under the principle of multiple use-multiple benefit to provide forest conservation, goods, and services for current and future generations. The management is guided by scientific principles, guiding legislation and comprehensive forest certification standards which are independently audited to help insure long term forest health, resiliency, and sustainability.

For management and planning purposes each State Forest is divided into a system of compartments and tracts. In general terms compartments are 300-1,000 acres in size and their subunits (tracts) are 10 - 300 acres in size. Resource Management Guides (RMGs) are then developed for each tract to guide their management through a 15-25 year management period. There are approximately 1,600 tracts in the State Forest system. During annual planning efforts 50-100 tracts are reviewed and RMGs developed based on current conditions, inventories and assessments.

The RMGs listed below and contained in this document are part of the properties annually scheduled forest inventories under review for Jackson-Washington State Forest.

Compartment 13 Tract 2

To submit a comment on this document, go to:

<https://www.in.gov/dnr/forestry/state-forest-management/public-comment/submit/>

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 and review posted at:

<https://www.in.gov/dnr/forestry/state-forest-management/public-comment/>

Note: Some graphics may distort due to compression.

State Forest: Jackson-Washington
Forester: Kegan Todt
Management Cycle End Year: 2039

Compartment: 13 Tract: 2
Date: May 17, 2019 Acres: 68
Management Cycle Length: 20

Location

Tract 2, also known as 6351302, is in Washington County, Indiana, more specifically Township 3 North, Range 5 East, Section 17 of Gibson Township. This area is located approximately 19 miles south of Brownstown off New Cut Road.

General Description

The general cover type is mixed hardwoods with stands of chestnut oak and oak-hickory existing in the western portion of the tract.

History

- In 1963, an 85.5-acre parcel was purchased from Willard and Ruby Lykins. Approximately 59 acres of this tract came from this purchase area.
- In 1981, a 10-acre parcel was purchased from The Nature Conservancy. Approximately 9 acres of this tract came from this purchase area.

Landscape Context

Most of the land north of the tract is Jackson-Washington State Forest. Adjacent to the tract to the southeast is also Jackson-Washington State Forest. The land to the south, east, and west is private property. Much of the private land is forested with scattered agricultural fields, ponds, and single-family residences within one mile.

Topography, Geology and Hydrology

The topography varies within the tract from gently rolling hills in the east to steep long hills in the west. There is one major ridge that enters the tract from the west and one minor ridge. There is a mapped intermittent stream that makes up the northern tract boundary. This stream flows east to Elk Creek. There is a mapped intermittent stream that cuts through the southeast corner of the tract that joins with the stream to the north as well. The parent material of the tract consists of sandstone, siltstone, and shale.

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.

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.

Gilpin-Berks loams (GnF) This soil complex is found on side slopes in the uplands. These are moderately steep to very steep, moderately deep, well drained soils. They are about 50 percent Gilpin soil and 35 percent Berks soil. The two soils occur as areas so intricately mixed that mapping them separately is not practical. These soils are fairly well suited for tree. The erosion hazard, the equipment limitation, seedling mortality, and plant competition are concerns in managing the 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. Seedlings survive and grow well if competing vegetation is controlled by cutting, girdling, or spraying. The site indexes for hardwood species range from 70 (black oak) to 95 (tulip poplar). Preferred trees to manage for are black oak, chestnut oak, scarlet oak, red oak, and white oak.

Wellston silt loam (WeC2, WeD) This 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. Wellston soils are on nearly level to steep uplands in areas of acid sandstone, siltstone, or shale bedrock; but are most common on ridgetops. Slope ranges from 0 to 50 percent but are dominantly 4 to 18 percent. Native vegetation consisted of oak, hickory, dogwood, tulip poplar, and cherry. 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. The site indexes for hardwood species is 81 (red oak) and 90 (yellow-poplar). Preferred trees to manage for are black oak, chestnut oak, persimmon, red oak, scarlet oak, shagbark hickory, yellow-poplar, and white oak.

Access

There is an existing fire lane in the tract to the north off Pull Tight Road. There is also foot access using the Knobstone trail.

Boundary

The tract boundaries are defined by a mapped intermittent stream to the north, and private property line to the east, south, and west.

Ecological Considerations

This tract contains diverse vegetation and wildlife resources conducive to providing habitat for a variety of wildlife species. Habitat includes:

- mixed hardwood stands with varied structure
- contiguous oak-hickory stands with varied structure

Hard mast trees such as oaks, hickories, and American beech provide food source to both game and non-game species.

The Indiana DNR Division of Forestry has developed compartment level guidelines for snag tree retention, an important wildlife feature. Snags are standing dead or dying trees. Snags provide value in a forest in the form of habitat features for foraging activity, den sites, decomposers, bird perching, bat roosts, squirrel caches, and stores a wide variety of invertebrates. As time passes, these snags fall contributing to the nutrient cycling as downed woody debris (DWD). DWD decomposes providing nutrients for remaining and new vegetative growth as well contributing to the complexity of the forest floor.

	Maintenance Level	Inventory	Available Above Maintenance
Snag 5"+ DBH	272	114	-158
Snag 9"+ DBH	204	114	-90
Snag 19"+ DBH	34	23	-11

It is important to note that these are compartment level guidelines and that even though the estimated tract data does not quite meet all target levels, it is likely that suitable levels are present for these habitat features in the surrounding landscape. The prescribed management will maintain or enhance the relative abundance of these features.

The tract is primarily a mixed hardwood forest with stands of oak and hickory. Grapevine, multiflora rose, and autumn olive were observed throughout the tract. Prior to a timber harvest treatment of these invasive species should be conducted.

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

Recreation

The Knobstone trail runs through the extreme eastern edge of the tract. During any management activity, specifically a timber harvest, this section of the trail may be closed and re-routed around the tract for public safety. Following the completion of management activities, the trail will re-

open to the public. However, given the trails proximity to the boundary line, it may be possible to avoid a closure or reroute.

Cultural

Cultural resource may be present, but their location is protected. Adverse impacts to significant cultural resources will be avoided during any activities.

Tract Subdivision Description and Silvicultural Prescription

Mixed Hardwood (36 acres)

This area of the tract is characterized as mixed hardwoods. Yellow poplar is the dominant species. The inventory estimated 4,972 bd.ft. of yellow poplar saw timber per acre followed by chestnut oak at 1,077 bd. ft. and black at 936 bd. ft. The bulk of the remaining tree species in this cover type are northern red oak, red maple, and sugar maple. The understory is diverse, but sugar maple and American beech are the dominant understory trees, followed by sassafras and red maple. Most of the hardwoods observed appeared healthy except for white ash, which showed signs of decline likely from Emerald ash borer. Many of the yellow poplar are crowded or overly mature and would benefit from a thinning to release and promote regeneration of younger healthier species. Regeneration openings are recommended in areas of this stand with good quality oak and hickory already established to encourage the contiguous presence of oak and hickory within the stand. Most of the multiflora observed in the tract was in the mixed hardwoods.

Dry Oak-Hickory (32 acres)

The western portion of the tract is mainly oak and hickory. Chestnut oak is the most prevalent with an estimated 4,164 bd. ft. per acre followed by black oak with 1,744 bd. ft. and white oak with 842 bd. ft. Other species that are abundant are bitternut hickory, pignut hickory, northern red oak, and shagbark hickory. Scattered throughout this stand is sugar and red maple. The understory offers chestnut oak, pignut hickory, and white oak regeneration. When a harvest occurs much of the volume from this area will come from chestnut oak. Most of these trees are crowded. A single tree selection harvest would release younger, healthier mature trees providing canopy gaps for sunlight, understory development, and advancement of oak and hickory understory.

Tract Summary Data

Species	# Sawtimber Trees	Total Bd. Ft.
American Beech	64	9,928
American Sycamore	54	8,620
Bitternut Hickory	101	11,356
Black Cherry	15	2,856
Blackgum	37	3,536
Black Oak	308	88,332
Chestnut Oak	725	167,348
Eastern Redcedar	197	9,044
Northern Red Oak	62	29,376
Pignut Hickory	87	25,296
Red Maple	86	12,036
Sassafras	19	2,040
Scarlet Oak	5	3,740
Shagbark Hickory	128	23,528
Sugar Maple	136	19,312
White Ash	92	29,988
White Oak	165	45,356
Yellow Poplar	507	197,744
Total:	2,788	689,452

Total acres= 68

Gingrich stocking= 73%

Total trees per acre= 66

Present volume per acre= 10,139 bd. ft.

Basal area per acre= 94.4

Projected harvest volume per acre= 2,000-3,100 bd. ft.

Summary Tract Silvicultural Prescription and Proposed Activities

This tract would benefit from a timber harvest but due to the logistics of access into the tract it is recommended that a harvest be completed in conjunction with Compartment 13 Tract 1 (6351301), which lies directly to the north. A timber harvest using a combination of single tree and group selection techniques will help sustain the overall health of the tract especially in areas of overcrowding and suppression. The site index of the soils presents a good opportunity for regeneration of desirable species to regenerate from the tree species released from a harvest.

The Knobstone Trail will be taken into consideration during the planning process. Along with the timber harvest a proposed management activity of timber stand improvement (TSI) should occur following the harvest to complete any regeneration opens, deaden trees not removed through the harvests, and any remaining vines or invasive species. This TSI project should occur within two years following the harvest. The invasive species should be treated situation. This tract should receive another inventory and management guide in 20 years. The proposed management activity should have little to no impact on wildlife communities, including the Indiana bat, within or near the tract.

Proposed Activities Listing

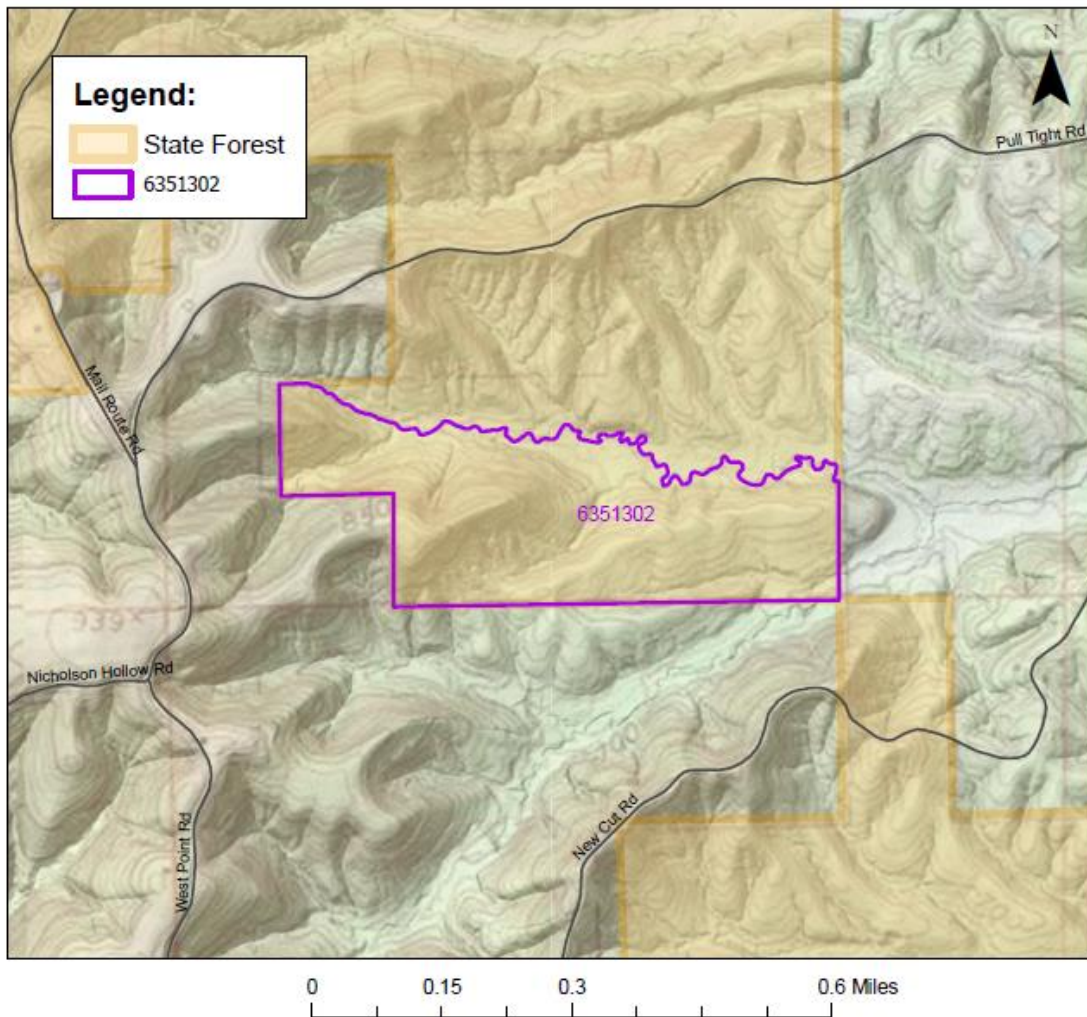
Proposed Management Activity

Invasive species control
Timber Harvest
Timber Stand Improvement
Inventory and Management Guide

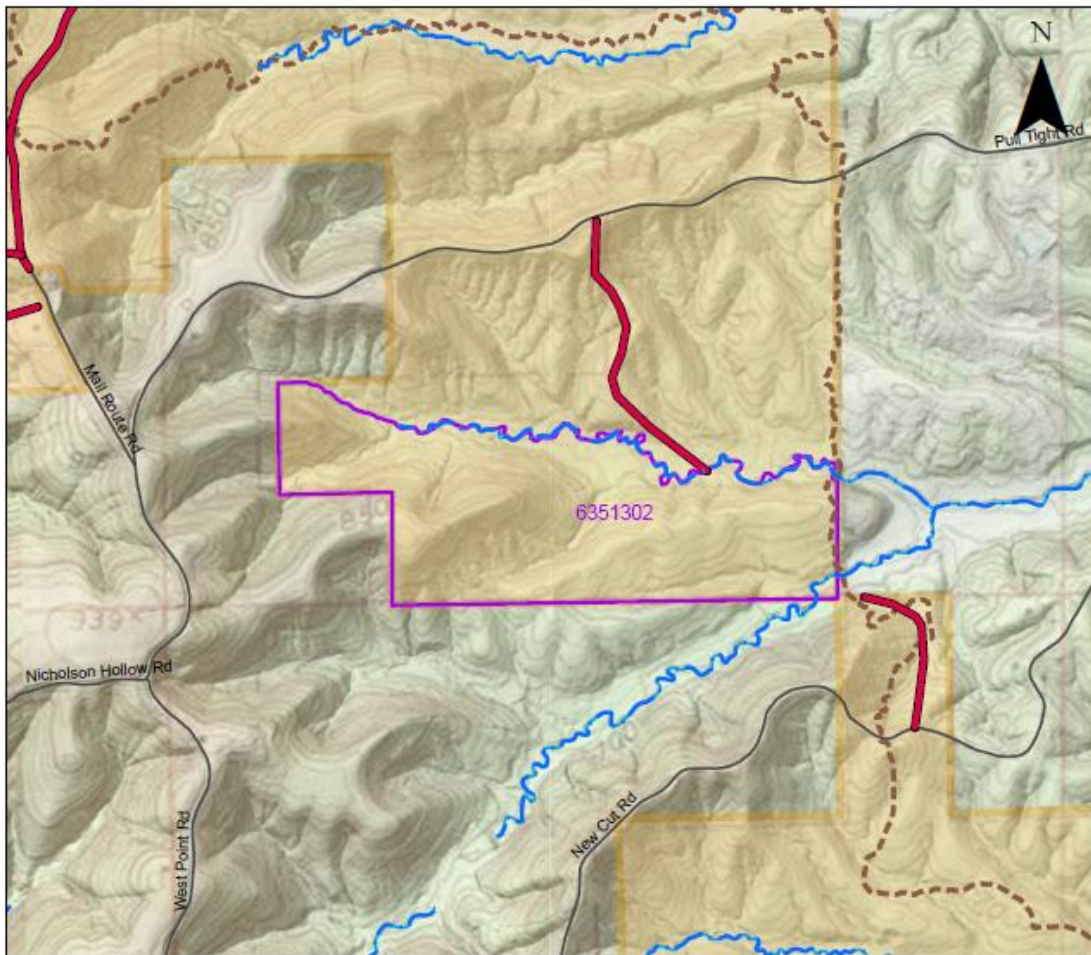
Proposed Date

2022-2023
2022-2024
2023-2026
2039

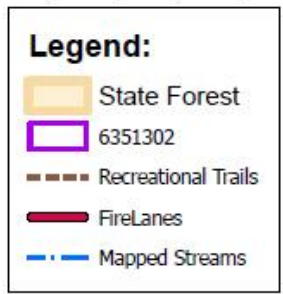
Location Map Jackson Washington State Forest Compartment 13 Tract 2



Jackson Washington State Forest Compartment 13 Tract 2 Tract Map



0 0.15 0.3 0.6 Miles



Jackson-Washington State Forest Compartment 13 Tract 2 Cover Types Map

