Indiana Department of Natural Resources
Division of Forestry

Indiana Department of Natural Resources

Resource Management Guides
Jackson-Washington State Forest
30-day Public Comment Period (December 9, 2025 – January 7, 2025)

The Indiana State Forest system consists of approximately 160,251 acres of primarily forested land distributed across the state. These lands are managed under the principle that we're stewards of this land for the future. This work is guided through legislation and comprehensive scientific national and international forest certification standards which are independently audited to help insure long-term forest health, resiliency, and sustainability.

Resource management guides (RMGs) are developed to provide long-term, scientific forest management planning tailored to each forest compartment (300-1,000 acres in size) and tract (10 - 300 acres in size). There are 1,590 tracts across the state forest system statewide. Annually, 50-100 tracts are reviewed, and these guides are developed based on current assessments. Through science-based management practices, we prescribe management actions on select tracts every 15-25 year, diversifying the forested landscape and sustaining ecosystems.

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 10 Tract 15
Compartment 10 Tract 17
Compartment 11 Tract 12

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.

Jackson-Washington State Forest	Compartment 10	Tract 15
Forester: Bailey McIntire	Date: July 26, 2023	Acres: 71
Management Cycle End Year: 2043	Management Cycle Length: 30	

Location
Tract 15, also known as 6351015, is between two sections, with the northern quarter of the tract in the bottom of Section 7, Township 3 North, Range 5 East, in Gibson Township, Washington County, Indiana. The southern three quarters of the tract are in Section 18, Township 3 North, Range 5 East, in Gibson Township. The tract lies approximately six miles south of Tampico, Indiana, and eight miles northeast of Salem, Indiana.

General Description
This tract is covered with oak-hickory, mixed hardwoods, and planted pine forest types. Oak-hickory dominates the sloped portions of the tract on the main two ridges and drainages while the mixed hardwoods occur towards the bottom of the slopes and along the mapped stream. A loblolly pine planting can be found in the northwest portion of the tract and continues into the northwestern bordering tracts. This tract is in the Jackson-Washington State Forest backcountry area and therefore will have special provisions.

History
- 1957 - 240 acres purchased from Thurman and Nora Saylor
- 1963 - Land acquisition totaling 410 acres from Willard B. and Ruby E. Lykins.
    - A report by the Division of Forestry dated June 11, 1962, indicates that 350 of these 410 acres were harvested by Lewis Lumber Company. It states that the area "now supports approximately 1,000 board feet per acre with good reproduction". The remainder was estimated at 2,400 board feet per acre. Additionally, the report recommended planting 12 open acres to shortleaf or red pine in 1964. This appears to have been accomplished. The report also stated that no fire damage was observed.
- 1971 - Forest Inventory: The tract was listed as 72 acres, with 56 containing merchantable timber and 16 acres of non-merchantable timber. The merchantable acreage was estimated to contain 1,045 board feet per acre, with 748 of that as harvest stock. The forester stated that the chestnut oak was too small and poorly formed to need a timber harvest. Timber stand improvement (TSI) was not recommended.
- 2013 - Forest Inventory: estimated a total of 6,727 board feet per acre with 2,103 acres of harvest stock and 4,623 of growing stock per acre. This management guide called for a timber harvest within the following 5 years. The last inventory and management guide expired before a harvest could be marked due to staffing shortages.
- 2023 - Forest inventory completed.

Landscape Context
The tract lies within the Knobstone Escarpment natural subregion. The dominant land use within the landscape surrounding this tract is forestland. This tract is in the middle of Jackson-Washington State Forest's largest landholding. Currently, the amount of early successional forest habitat in this area is relatively low as most of this land hasn't been harvested or managed in quite some time. Most of the abandoned fields prior to state ownership have become closed

canopy forests. Surrounding the large block of state-owned forestland are single-family residences, crop fields, watershed lakes, and grasslands/ fields. Several timber harvests have occurred on private lands surrounding this section of the state forest. Most appear to have been diameter limit high-grade harvests, while some have been harvested with long-term forest management as an end goal.

Topography, Geology and Hydrology

The topography of this tract consists of two broad flat ridges and steep side slopes. All the aspects are south, southwest, or west facing slopes. Even the slopes that fall more towards the north still have south or west influence. The underlying geology consists of sandstone, siltstone, and shale. This entire tract flows into ephemeral and intermittent streams that drain into the Spurgeon Hollow Lake. Water flowing out of Spurgeon Hollow Lake enters Delaney Creek, and eventually the Muscatatuck River. A small wildlife pond is located on the east side of the tract.

The 2022 Best Management Practices (BMP) Field Guide will be followed during any management activities that may take place within the tract.

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, sugar maple, and yellow poplar.

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, sugar maple, yellow-poplar, and white oak.

Zanesville silt loam (ZaC2) This gently sloping, deep, moderately well-drained or well-drained soil is found on ridge tops on the uplands. The soil is well suited to trees. Plant competition is moderate. Seedlings survive and grow well if competing vegetation is controlled by cutting, girdling, or spraying. The site index for this soil ranges from 70 (white oak) to 90 (yellow-poplar). Preferred trees to manage for are black oak, bur oak, chestnut oak, persimmon, scarlet oak, red oak, and white oak.

Access
To access this tract, traveling north from the intersection of Pull Tight Road and Mail Route Road, go 0.9 miles until reaching Fire Lane 750. Then travel west on the fire lane for approximately a quarter of a mile to the beginning of the tract boundary. The boundary then follows the fire lane for another 0.35 mile west.

Boundary
The northern boundary follows Fire Lane 750. The southern boundary follows an intermittent stream Fire Lane 701, and a section of the Knobstone Trail. The eastern boundary follows the top of ridge for the northern half, eventually leading into an ephemeral stream for the southern half. The western boundary is also an ephemeral stream that merges into an intermittent stream as it travels from north to south.

Ecological Considerations
Wildlife observed during the inventory included, white tailed deer, eastern chipmunk, eastern gray squirrel, various songbird species, turkey, American toad, and eastern box turtles.

The Division of Forestry has developed compartment level guidelines for important wildlife structural habitat features such as snags and legacy trees. Snags are standing dead or nearly dead trees. Snags provide value to a stand in the form of habitat features for foraging activity, den sites, decomposers, bird perching, and bat roosting. Snags eventually contribute to the future pool of downed woody material, which provides habitat for many ground-dwelling species and contributes to healthy soils. Legacy trees are live trees of a certain species and diameter class, that have potential future value to various wildlife species, if retained in the stand.

Current assessments indicate the abundance of these habitat features do not meet or exceed recommended maintenance levels in all diameter classes. Where opportunities exist, snags in the larger size classes will be created by culling standing trees to meet guidelines. 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, data collected during the Continuous Forest Inventory within Compartment 10 indicates snag levels exceed all compartment-level targets. So, while tract-levels may be lower than the surrounding area, overall densities across the compartment meet Division of Forestry guidelines

Invasive species include multiflora rose and Japanese stiltgrass found around the wildlife pond within the tract. These species continued growing 25-50 feet from the pond on all sides. Both species were also observed alongside the fire lane that follows the northern boundary of the tract. Small, isolated patches of multiflora rose can be found throughout the tract.

A formal Ecological Review process, which includes a search of Indiana's Natural Heritage Database, is part of the management planning process. If Rare, Threatened, or Endangered species were found to be associated with this area, the activities prescribed in this guide will be conducted in a manner that will not threaten the population viability of those species or communities.

Recreation
This tract is used by the public for hunting and hiking. A section of the Knobstone Trail follows Fire Lane 750 on both the southern and northern border of the tract. Both sections would need to be temporarily re-routed during an active timber harvest. Another section of the trail intersects with a valley bottom of an intermittent stream. Fire Lane 750 also acts as one of the disabled hunter trails for the state forest. If active management occurs during hunting season, modifications will be required for public safety.

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

Tract Subdivision Description and Silvicultural Prescription
Mixed Hardwoods (16 acres)
This subdivision (i.e., cover type) is dominated by sugar maple, red maple, yellow-poplar, and American beech. The overall tree quality ranges from poor to good quality or form. The sawtimber species include yellow poplar, and loblolly, red, Virginia, and shortleaf pine, American beech, sugar maple, and red maple. The pine is declining due to high stocking. These range from pole sized to medium sawtimber. The regeneration present in this subdivision includes American beech, yellow poplar, red and sugar maple, sassafras, and chestnut oak. Some oak and hickory regeneration was also noted; however, it is hindered by the American beech and maples in the mid-story and overstory. Some chestnut oak and sassafras mortality has created small canopy gaps in the subdivision. Single-tree selection should be implemented to help release oak regeneration and healthy trees. Trees targeted for removal include those in poor health, defects, or damage. The inventory results indicate an estimated total volume of 7,345 board feet per acre in this subdivision.

Dry Oak-Hickory (55 acres)
This subdivision of the tract is dominated heavily by chestnut oak. Most of the chestnut is in poor form, growing on ridge tops with low forks and poor form. Sizes range from pole to medium-large sawtimber. White and black oak average more around medium to large sawtimber sizes. White oak and northern red oak can be found with the chestnuts but are more commonly found with black oaks in areas where soils improve on the lower slopes. Pignut and shagbark hickories, as well as scarlet oak, are also found throughout the tract but are not as dominant as the other oak species. Common mixed hardwoods species including sugar maple, yellow-poplar, red maple, and white ash can be found along the intermittent and ephemeral streams that follow

boundaries along the tract. The understory is predominantly American beech, sugar maple, and red maple. The regeneration layer is heavily carpeted by greenbrier in some areas and lighter towards the bottom of ridges and slopes but is present throughout the whole tract. Regeneration that occurs in this tract includes chestnut oak, white oak, black oak, northern red oak, scarlet oak, ash, sassafras, pignut hickory, shagbark hickory, American beech, and red and sugar maple. Single-tree selection will be used to thin the declining chestnuts from this area to improve the vigor and health of surrounding residual trees. This should be followed by TSI to further help release regeneration and promote a diverse stand. The inventory results indicate an estimated total volume of 9,625 board feet per acre in this subdivision.

The current forest resource inventory was completed on July 26, 2023, by Elizabeth Carter. A summary of the estimated tract inventory results is located in the table below.

Tract Summary Data (trees >11"DBH):

Species	# Sawtimber Trees	Total Bd. Ft.
Chestnut oak	1,425	268,230
White oak	286	84,690
Black oak	126	48,460
Northern red oak	95	36,710
Sugar maple	295	35,600
Loblolly Pine	183	27,520
Pignut hickory	124	26,480
Yellow poplar	36	21,020
Scarlet oak	108	15,900
Red maple	117	14,080
Shagbark hickory	100	13,360
American beech	23	13,160
American sycamore	34	11,270
Basswood	22	6,730
Black cherry	6	2,850
White ash	6	2,490
Blackgum	13	1,820
Sassafras	25	650
Total	**3,024**	**631,020**

Summary Tract Silvicultural Prescription and Proposed Activities

A timber harvest should be marked in this tract within the next five years. It is recommended to include the adjacent tract 6351017 with this harvest. The harvest should focus on thinning the overstocked stands of chestnut oak and harvesting trees with fire and wind damage, drought-stressed trees, planted pine species, and mixed hardwoods that release oak and hickory species. Due to its location in the backcountry area single-tree selection is to be used throughout the tract to reduce stocking and improve the overall health of the stand. The inventory estimated 8,888 board feet per acre, with a total potential harvest volume of 117,740 to 269,120 board feet from

the entire tract.

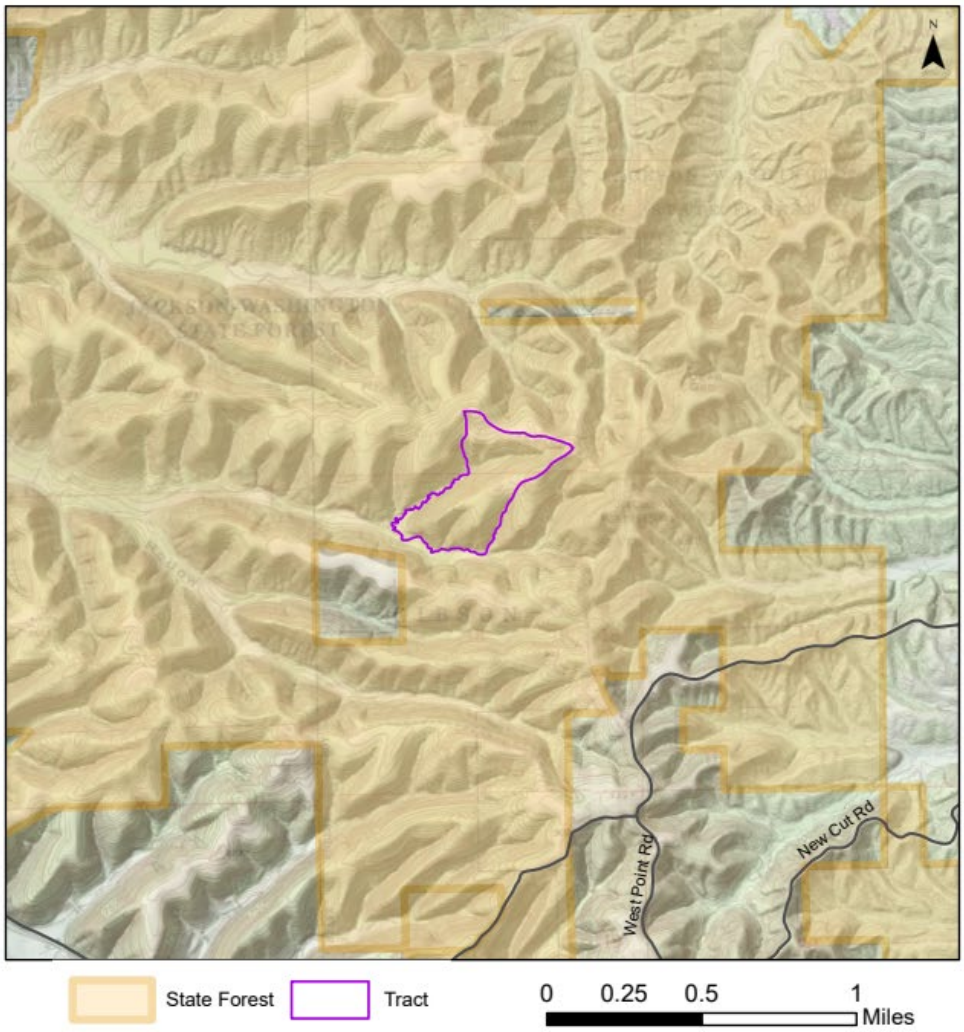
After the harvest is completed post-harvest TSI will be carried out to complete any openings; reduce competition from shade tolerant species; and release oak, hickory, and other crop trees in the remaining acreage. During this process some trees will be deadened to increase the number of snags that are available as wildlife habitat.

A prescribed fire regime should be implemented after post-harvest TSI on a 3-5 year interval. This will encourage seed germination of oak and hickory species by reducing understory competition and exposing bare mineral soil within the oak hickory subdivision.

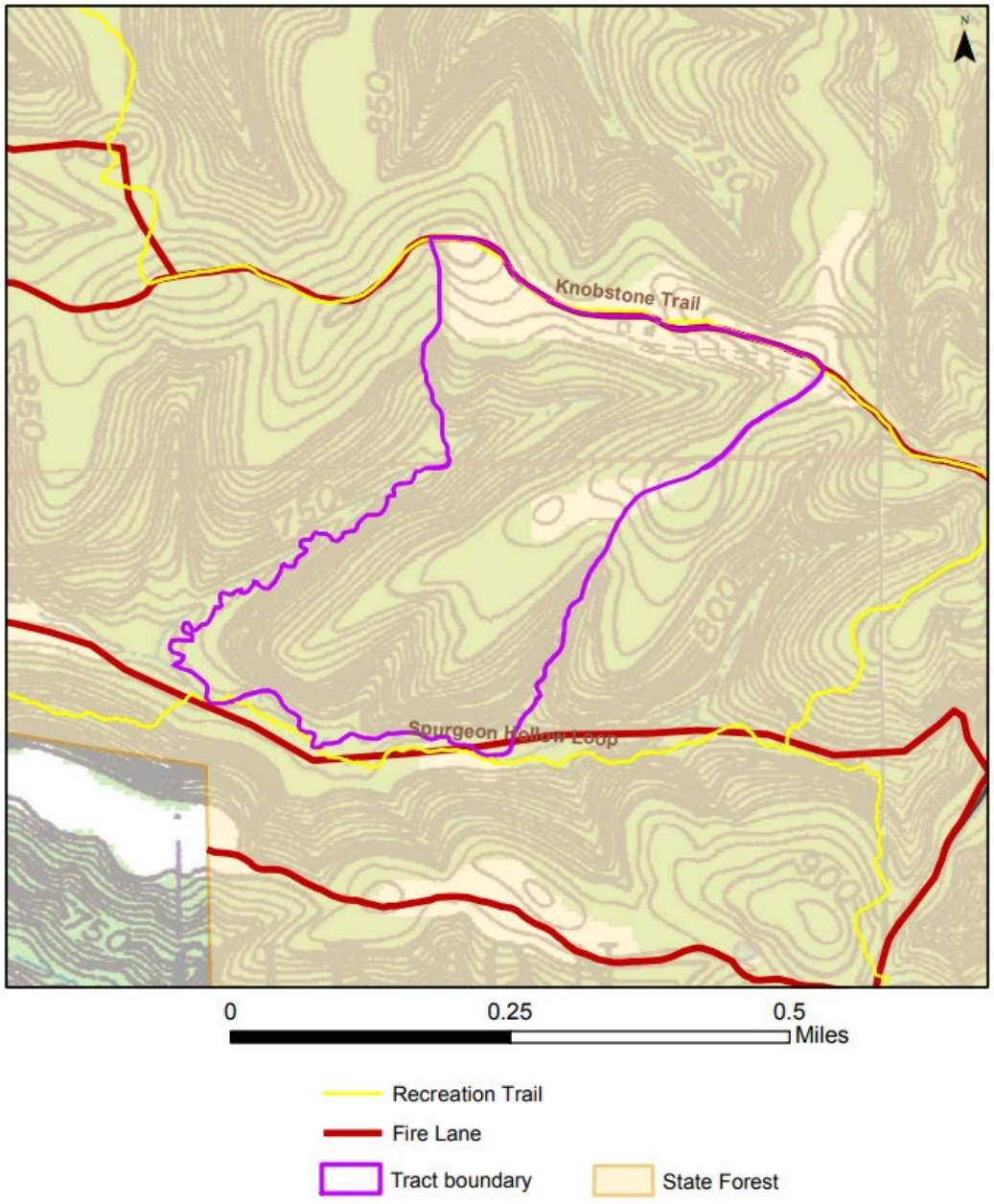
Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Mark timber	2026-2027
Timber harvest	2026-2029
Post-harvest timber stand improvement	1 to 2 years after harvest
Prescribed fire regime	1 to 2+ years after post-harvest TSI
Regeneration monitoring	5 years after the harvest
Next forest inventory	2053

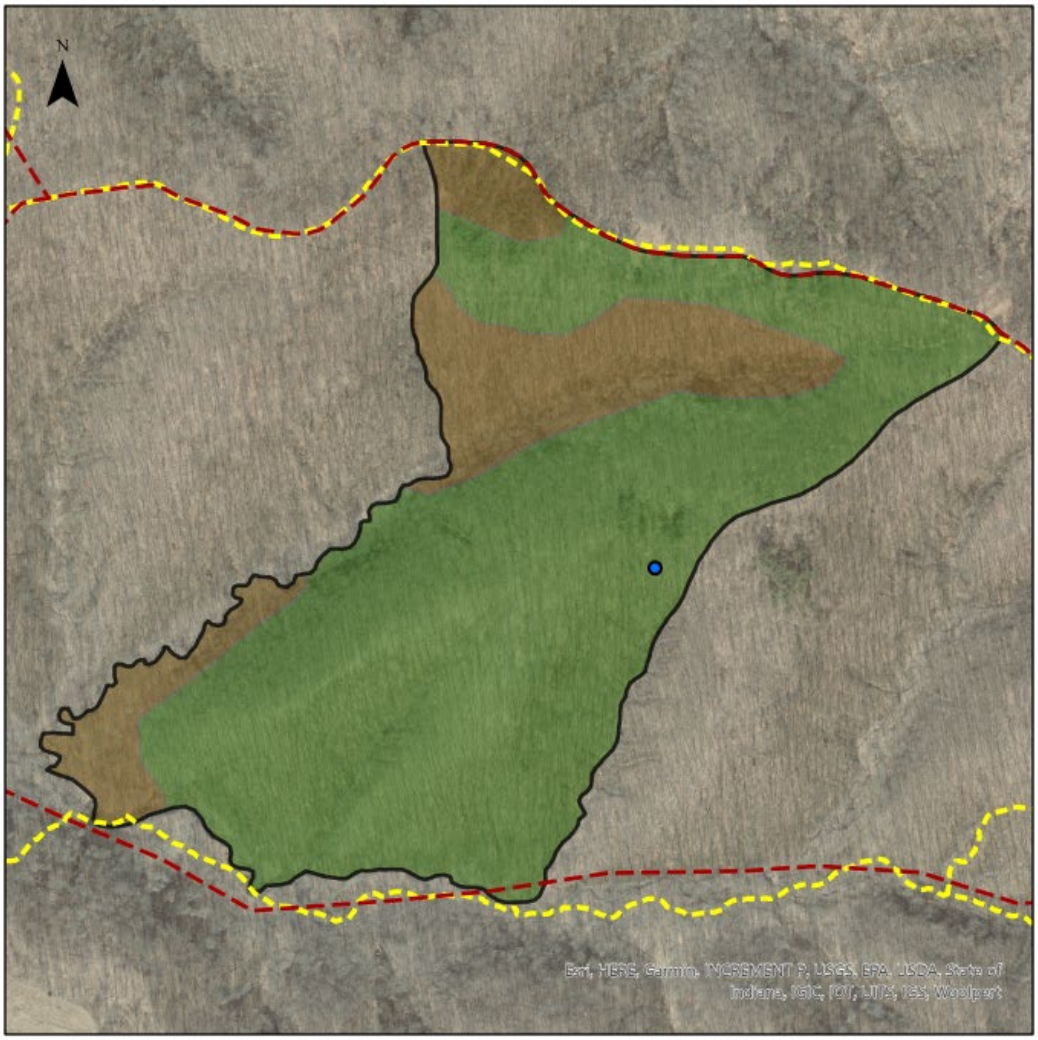
Jackson-Washington State Forest
Location Map
Compartment 10 Tract 15



Jackson-Washington State Forest
Compartment 10 Tract 15
Tract Map



Jackson-Washington State Forest
Compartment 10 Tract 15
Cover Types Map



Jackson-Washington State Forest	Compartment 10	Tract 17
Forester: Krista Jones (née Marshall)	Date: July 7, 2023	Acres: 71
Management Cycle End Year: 2053	Management Cycle Length: 30 years	

Location
This tract, also referred to as 6351017, is located along Mail Route Road in Sections 7 and 18, Township 3N, Range 5E, Gibson Township, Washington County, Indiana. Salem, Indiana, is situated approximately 8.5 miles southwest of the tract.

General Description
This tract was formerly known as Compartment 42, Tract 12. It encompasses approximately 71 acres, all of which excepting one-tenth of an acre fall within the backcountry area. Much of that acreage is covered by oak-hickory forest, which is overwhelmingly dominated by chestnut oak. Mixed hardwoods, including several areas of planted pine, constitute the remaining acreage.

History
- June 18, 1954: Land acquisition totaling 120 acres from Frank H. and Elzina Frazier.
- September 19, 1957: Land acquisition totaling 240 acres from Thurman W. and Nora Saylor.
- March 27, 1963: Land acquisition totaling 410 acres from Willard B. and Ruby E. Lykins.
    - A report by the Division of Forestry dated June 11, 1962, indicates that 350 of these 410 acres were harvested by Lewis Lumber Company. It states that the area "now supports approximately 1,000 board feet per acre with good reproduction". The remainder was estimated at 2,400 board feet per acre. Additionally, the report recommended planting 12 open acres to shortleaf or red pine in 1964. This appears to have been accomplished.
- April 1971: A forest inventory estimated total volume per acre to be 1,024 board feet, with 650 board feet per acre of harvest stock and 374 board feet per acre of growing stock.
    - The forester did not recommend a harvest or timber stand improvement (TSI) at the time since most of the trees were not of sufficient quality or size.
- February 5, 2013: A forest inventory estimated total volume per acre to be 7,666 board feet per acre, with 2,164 board feet per acre of harvest stock and 5,502 board feet per acre of growing stock.
    - A harvest was prescribed. The top three harvest species by volume were yellow poplar, chestnut oak, and white ash. However, no timber was ever marked, and the harvest did not take place due to staffing shortages.
- July 7, 2023: A forest inventory estimated total volume per acre to be 11,078 board feet, with 3,373 board feet per acre of harvest stock and 7,705 board feet per acre of growing stock.

Landscape Context
The tract lies within the Knobstone Escarpment natural subregion. It also happens to be in the center of Jackson-Washington State Forest's largest landholding. Consequently, the dominant land use of the surrounding landscape is forestland, with scattered crop fields and watershed

lakes. Several timber harvests have occurred on some of the private lands adjacent to this large block of public forest. Most appear to have been diameter limit high-grade harvests, while some have been harvested with long-term management as a directive. The amount of early successional forest habitat in this area is relatively low. Most of the fields that were abandoned prior to state ownership have since become closed-canopy forest. Development in the area is limited to a few single-family residences. Distance to municipalities and poor economic conditions have kept the construction of new homes to a minimum.

Topography, Geology and Hydrology
The topographical features of this tract include broad, flat ridges and moderately steep side slopes. All aspects are south- or west-facing. Even those slopes that are partially facing north or east still have a west or south influence. The underlying geology consists of mostly of siltstone. One wildlife pond is present in the tract near the intersection of Fire Lane 750 and Mail Route Road. The tract also contains two mapped intermittent streams that transition into a perennial stream. This perennial flows into Spurgeon Hollow Lake, which drains into Delaney Creek. Runoff from Delaney Creek subsequently flows into the Muscatatuck River.

The 2022 Best Management Practices (BMP) Field Guide will be followed during any management activities that may take place within the tract.

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, sugar maple, 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.

Hagerstown silt loam (HaC2) This series consists of deep and very deep, well drained soils formed in residuum of hard gray limestone. Slope ranges from 0 to 45 percent. Permeability is moderate. Native vegetation is mixed hardwoods. This soil is well suited to trees. The equipment limitation is moderate. During wet periods, roads tend to be slippery and ruts form easily. The roads should be built on gentle grades, and water should be removed with water bars, culverts, and drop structures. The site indexes for hardwood species range from 70 (white oak) to 90 (yellow-poplar). Preferred trees to manage for are black cherry, black oak, black walnut, chinkapin oak, chestnut 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, sugar maple, yellow-poplar, and white oak.

Zanesville silt loam (ZaB, ZaC2) This gently sloping, deep, moderately well-drained or well-drained soil is found on ridge tops on the uplands. The soil is well suited to trees. Plant competition is moderate. Seedlings survive and grow well if competing vegetation is controlled by cutting, girdling, or spraying. The site index for this soil ranges from 70 (white oak) to 90 (yellow-poplar). Preferred trees to manage for are black oak, bur oak, chestnut oak, persimmon, scarlet oak, red oak, and white oak.

Access

The tract is accessed via Mail Route Road half a mile north of its intersection with Pull Tight Road. Fire Lane 750, which intersects Mail Route Road at the tract's northeast corner, provides excellent access within the tract for most management activities. Fire Lane 750 runs concurrent with the Spurgeon Hollow Loop of the Knobstone Trail. A second fire lane numbered 701 provides additional access in the bottoms.

Boundary

The eastern boundary of this tract is Mail Route Road. The western boundary follows a ridgetop southwest and into an ephemeral drainage before terminating at the mapped intermittent stream. An ephemeral stream that transitions into a mapped intermittent stream as it travels from east to west acts as the tract's southern boundary. The northern boundary is Fire Lane 750.

Ecological Considerations
Wildlife observed during the inventory include five-lined skink, chipmunk, gray ratsnake, raccoon, turkey, squirrel, and various songbird and woodpecker species.

The Division of Forestry has developed compartment level guidelines for important wildlife structural habitat features such as snags and legacy trees. Snags are standing dead or nearly dead trees. Snags provide value to a stand in the form of habitat features for foraging activity, den sites, decomposers, bird perching, and bat roosting. Snags eventually contribute to the future pool of downed woody material, which provides habitat for many ground-dwelling species and contributes to healthy soils. Legacy trees are live trees of a certain species and diameter class, that have potential future value to various wildlife species, if retained in the stand.

Current assessments indicate the abundance of these habitat features meet or exceed recommended maintenance levels.

Japanese stiltgrass was the only invasive species noted in the tract during the inventory. It was most prevalent along the fire lanes and Mail Route Road, including two parking areas. While the stiltgrass does not appear to be a significant problem at this time, treatment should take place as time and resources allow to prevent its spread to the tract's interior. If not treated prior to management activities, invasives should be monitored during marking of the harvest as well as during the next inventory and treated as necessary.

A formal Ecological Review process, which includes a search of Indiana's Natural Heritage Database, is part of the management planning process. If Rare, Threatened, or Endangered species were found to be associated with this area, the activities prescribed in this guide will be conducted in a manner that will not threaten the population viability of those species or communities.

Recreation
The two primary recreational uses of the tract are hunting and hiking. The tract contains a portion of the Knobstone Trail, which runs along the ridgetop and loops down into the valley bottom. This section of the trail will be temporarily rerouted during timber harvesting activities for public safety. In addition to being a fire lane, Fire Lane 750 also serves as one of Jackson-Washington State Forest's disabled hunter trails, which will require temporary measures if the timber harvest is active during hunting season.

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

Tract Subdivision Description and Silvicultural Prescription
Dry Oak-Hickory (46 acres) This subdivision (i.e., cover type) is limited to single-tree selection due to the tract's location within the backcountry area. Chestnut oak is the most frequently occurring species. White oak, scarlet oak, northern red oak, and black oak are more commonly found on the mid to lower slopes in areas where the soils improve. These tend to have straight, clear boles. Pignut and shagbark hickories are found throughout but are not as dominant as the other oak species. Other overstory species include sugar maple, red maple, yellow poplar,

American beech, black walnut, and a few remnant shortleaf pine. The size of timber ranges from pole to large sawtimber. Spacing of trees is generally good. The chestnut oak present on the ridgetops is poor to average quality, with several pockets of mortality occurring throughout the subdivision. It will need to be thinned during a timber harvest to release the better-quality stems and provide residual trees with more growing space. The midstory is dominated by sugar maple and red maple; however, some suppressed chestnut oak, white oak, and pignut hickory poles are present in the midstory that will need released through either a timber harvest or timber stand improvement (TSI). The understory is mostly American beech, with some sugar and red maple mixed in. The regeneration layer is dominated by greenbrier throughout most of the subdivision except on the lowest parts of the slopes and along the intermittent streams. Where it occurs, regeneration is virtually non-existent. In areas where the greenbrier is not as dense, the more shade tolerant species of seedlings frequently outnumber the oak and hickory seedlings. To maintain this oak-hickory stand in a healthy and vigorous condition, mixed hardwood species should be harvested in locations that provide release to residual oak or hickory trees. Prescribed fire should also be implemented to promote oak-hickory seedling establishment by controlling the dense greenbrier layer and reducing competition from shade tolerant species. Remnant pine and mature or over-mature trees exhibiting reduced vigor or poor health due to age or disease should also be removed through single tree selection.

Mixed Hardwoods/Pine (25 acres) This subdivision is limited to single-tree selection due to the tract's location within the backcountry area. It contains several acres of planted eastern white, shortleaf, and loblolly pines, although only a few pine trees fell within any of the inventory plots. The top two species are yellow poplar and red maple. Other overstory trees include chestnut oak, American beech, sassafras, white oak, sugar maple, blackgum, and shagbark hickory. Persimmon was present on the western ridge but, as with the pine, did not fall into any inventory plots. Overall quality in this area is poor to average; however, the oaks and hickories tend to be better quality. Size of the trees ranges from pole to large sawtimber. Several of the mixed hardwoods on the ridges exhibit the low, widespread branching typical of open grown pasture trees. These ridges also feature a few canopy gaps created from the mortality of the pioneer species that first colonized the abandoned agricultural fields. Most of the white pine has died as well. The sassafras and eastern redcedar in both the mid- and overstory that naturally regenerated throughout the planted pine over the last 50 years has also aged out of the stand. This has resulted in a few small canopy gaps. Most of the remaining pines are in poor health and decline and should be thinned. There is small sawtimber yellow poplar in the bottoms with exceptional quality and form. These should be thinned as well to reduce stem density while retaining trees with the healthiest crowns. The midstory consists primarily of sugar maple and American beech. Pignut hickory, shagbark hickory, and several oak species are also present but are suppressed. American beech dominates the understory in most places.

The current forest resource inventory was completed on July 7, 2023, by Krista Jones. A summary of the estimated tract inventory results is located in the table below.

Tract Summary Data (trees >11"DBH):

Species	# Sawtimber Trees	Total Bd. Ft.
Chestnut oak	2,046	360,320
White oak	564	112,660
Yellow poplar	333	90,250
Scarlet oak	296	44,830
Black oak	107	42,090
Red maple	369	36,220
Northern red oak	105	27,270
Sugar maple	175	18,180
Pignut hickory	60	14,260
Shagbark hickory	100	11,360
American beech	114	9,100
Sassafras	42	7,420
Black walnut	22	4,580
Eastern white pine	42	2,960
Shortleaf pine	42	2,960
Blackgum	49	2,100
Total:	**4,466**	**786,560**

Summary Tract Silvicultural Prescription and Proposed Activities
This tract should receive a harvest in conjunction with the adjacent tract 15 (6351015) within the next five years. Both tracts are limited to single-tree selection due to their location within the backcountry area of Jackson-Washington State Forest. Trees targeted for removal should include mixed hardwoods and pines to release oak and hickory species; and those with poor vigor from damage, insects, disease, drought stress, or maturity. This management practice will help to reduce overall stocking and improve growth rates of the residual mature trees within the stand. It will also improve the regeneration of shade intolerant species by increasing the amount of sunlight able to reach the forest floor. Prescribed fire is also needed to promote oak-hickory regeneration by controlling the near complete groundcover of greenbrier on the ridges and upper slopes and by reducing the high density of red maple saplings in the understory. This harvest will drop the stocking level from approximately 93% to the B-line at 60%. The inventory estimated 11,078 board feet per acre, with a total potential harvest volume of 157,943 to 312,369 board feet from the entire tract. Top three harvest species by volume include chestnut oak, yellow poplar, and red maple. The harvest will result in a healthier, more vigorous stand of forest that will be primarily dominated by the oak-hickory cover type.

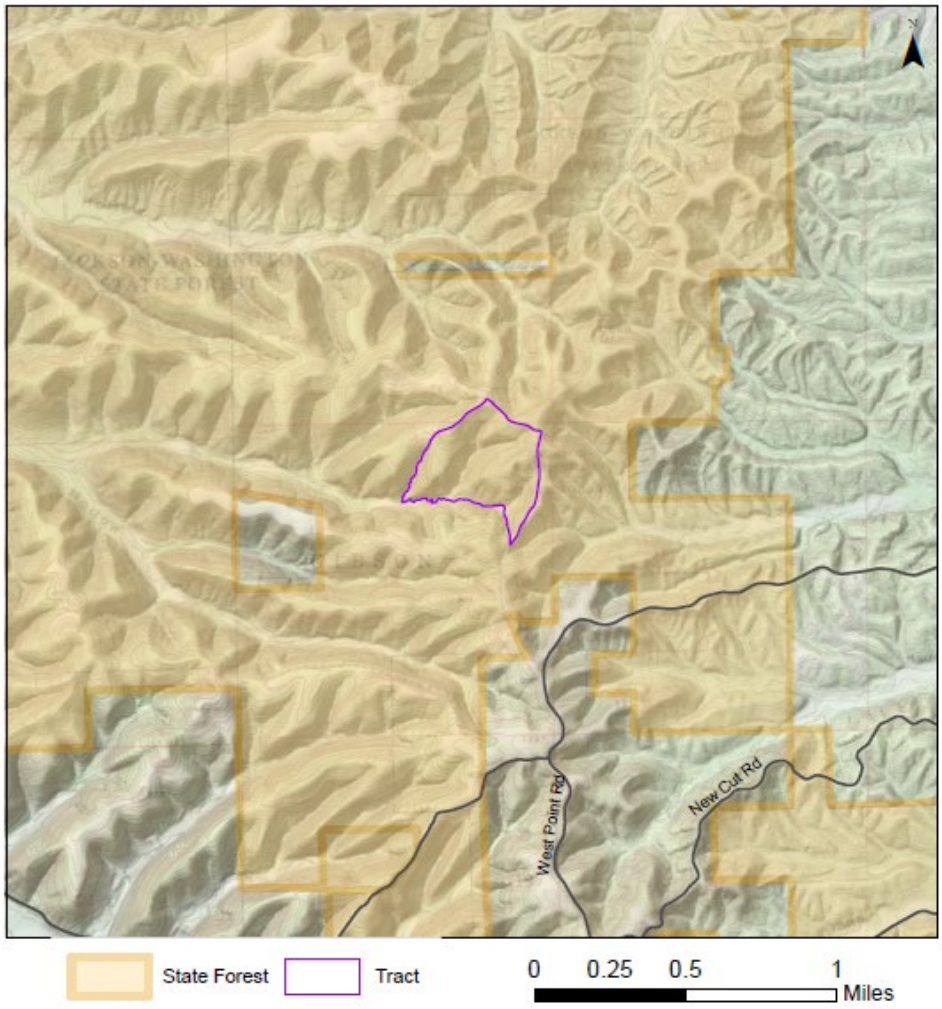
A TSI operation should occur within two years of the timber harvest to reduce competition from shade tolerant species; and release oak, hickory, and other crop trees in the remaining acreage. A fire regime should follow the completion of post-harvest TSI. This will encourage the establishment of oak and hickory species by reducing the understory and improving conditions to promote seed germination.

During and after completion of the timber harvest, BMPs will be implemented to minimize soil erosion.

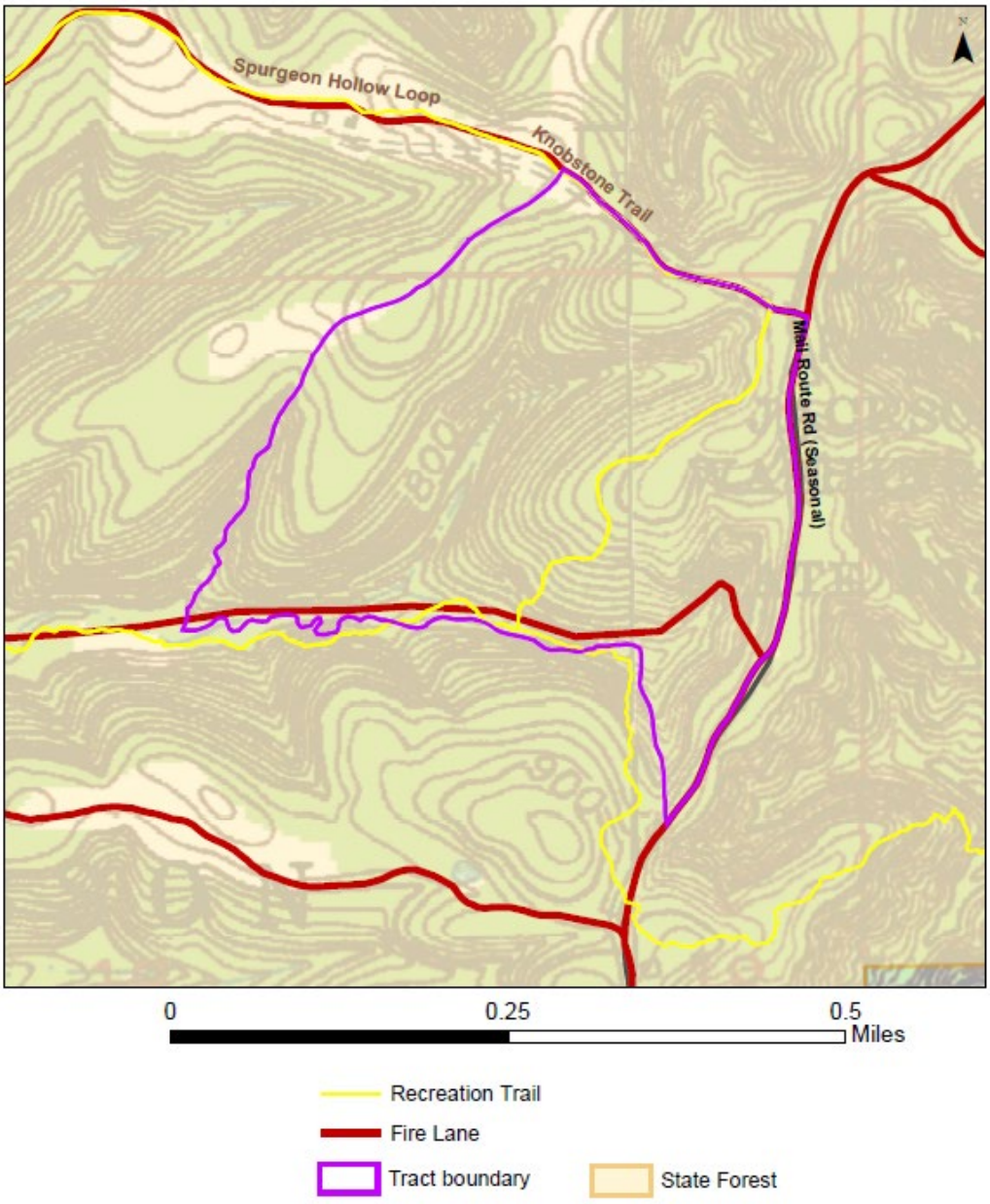
Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Mark timber	2026-2027+
Pre-harvest TSI and/or invasives	2026-2027
Timber harvest	2026-2030
Post-harvest TSI and/or invasives	1 to 2 years after harvest
Prescribed fire regime	1 to 2+ years after post-harvest TSI
Next forest inventory	2053

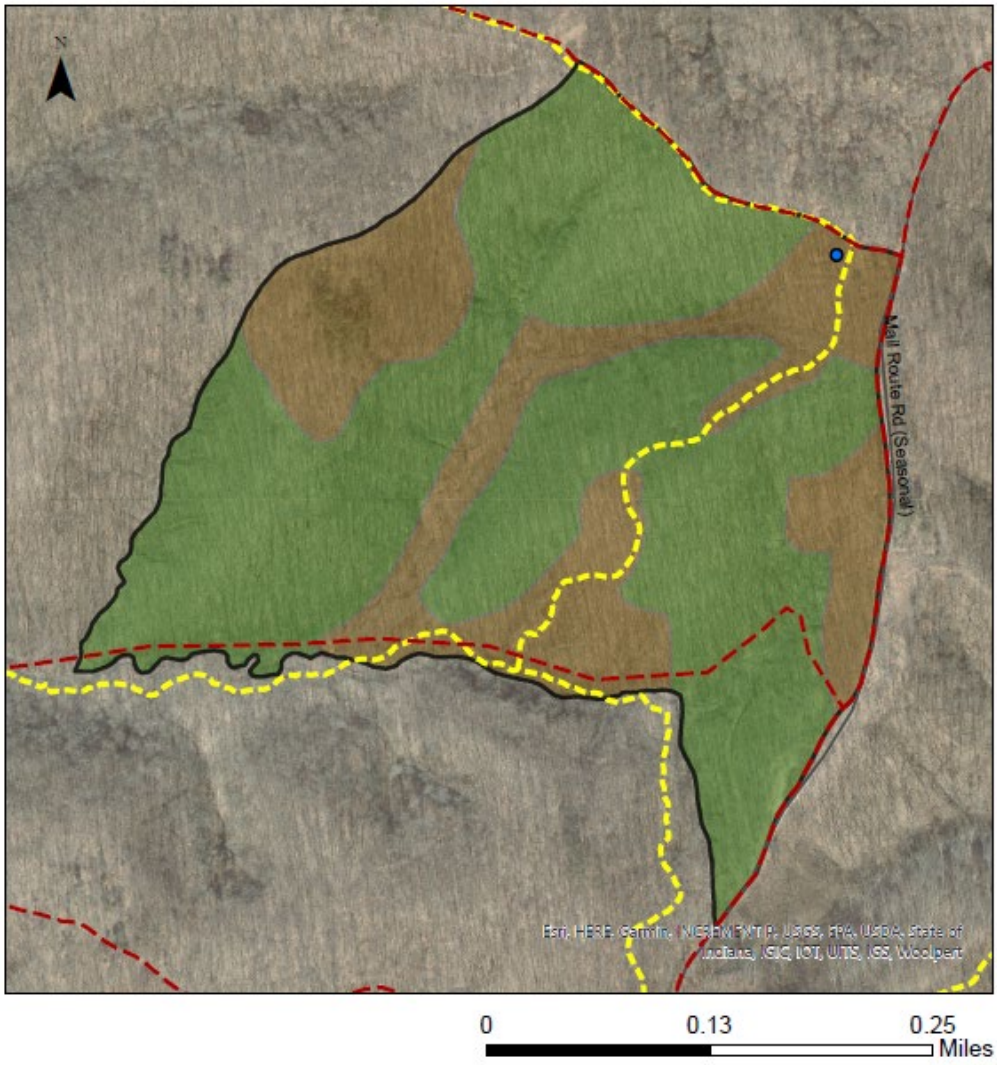
Jackson-Washington State Forest
Location Map
Compartment 10 Tract 17



Jackson-Washington State Forest
Compartment 10 Tract 17
Tract Map



Jackson-Washington State Forest
Compartment 10 Tract 17
Cover Types Map



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Legend

- Dry Oak-Hickory
- Mixed Hardwoods
- Tract Boundary
- Wildlife Ponds
- Recreational Trails
- Fire Lanes

Jackson-Washington State Forest | Compartment: 11 | Tract: 12
Forester: Ross Danson | Date: January 25, 2018 | Acres: 81
Management Cycle End Year: 2045 | Management Cycle Length: 20

Location
The tract, also referred to as 63511012, is in Washington County, Indiana, approximately 13 miles northeast of Salem, Indiana. More specifically in Sections 7 and 8, Township 3N, Range 5E.

General Description
The general cover type is oak-hickory and mixed hardwood forests, with a small area of planted pine.

History
- 1955 Land purchased from J. Kirk Cheatham & Mary Etta Cheatham (500 acres).
- 1958 Land purchased from Samuel M. Dinkelspiel (40 acres).
- 1965 Land purchased from Russell and Woodrow Cheatham (76 acres).
- 1972 Management guide completed
    - guide indicates that most of the tract contained pole-sized trees in the overstory.
    - estimated 1,400 board feet (bd.ft.)/acre of sawtimber.
    - In the northwestern corner of the tract, the guide estimated 3,000 bd.ft./acre of sawtimber.
- 2001 Land purchased from Harold B. Wright (20 acres).
- 2001 Land Purchased from World Broadcasting Incorporated (20 acres).
- 2003 Firetrail Maintenance
- 2006 Land purchased from Claude Wright (20 acres).
- 2018 Forest inventory completed

Landscape Context
This tract is on the east side of Mail Route Road, approximately a mile and a half north of Pull Tight Road. The tract is surrounded by state forest land, with one exception: a 20-acre private property in-holding is located on the west side of Mail Route Road adjacent to the western tract boundary. Excluding this in-holding, the tract is located within Jackson-Washington's largest contiguous landholding. This large block of state forest property is surrounded by private forest land, agricultural fields, and single-family residences.

Topography, Geology and Hydrology
The tract is bordered by a horseshoe shaped ridge, with the open end of the horseshoe facing north. Numerous ephemeral drainages descend off the horseshoe shaped ridge into a drainage valley in the center of the tract. In the drainage valley is a mapped intermittent stream that flows north. Most of the bedrock underlying the soils in this tract is a combination of sandstone, shale, and siltstone.

Soils
Berks-Weikert complex (BhF) The site indexes for hardwood species range from 50 (black oak) to 70 (white oak). 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. They are about 55% Berks soil and 35% Weikert soil. 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. Because of the windthrow hazard, harvest methods should not isolate the remaining trees or leave them widely spaced. Preferred trees to manage for are black oak, bur oak, chestnut oak, scarlet oak, red oak, and white oak.

Burnside silt loam (Bu) The site index for hardwood species is 95 for yellow-poplar. 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. Most areas are used as pasture or woodland. Some areas are cleared and used as cropland. Native vegetation is deciduous hardwoods. This soil is well suited for trees. Plant competition is moderate. Preferred trees to manage for are bitternut hickory, bur oak, pin oak, red maple, shingle oak, and swamp white oak.

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. 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.

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. 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, sugar maple, yellow-poplar, and white oak.

Zanesville silt loam (ZaB, ZaC2) This gently sloping, deep, moderately well-drained or well-drained soil is found on ridge tops on the uplands. The soil is well suited to trees.

Access
From the intersection of Pulltight Road and Mail Route Road, travel north on Mail Route Road for approximately a mile and a half. The tract lies on the east side of the road. Fire trail 760 goes east off Mail Route Road at the southern tip of the tract; this fire trail provides access to the southern and eastern portions of the tract.

Boundary
To the east, west and south, the tract is bounded by a horseshoe shaped ridge, Mail Route road and fire trail 760 are on top of this ridge and delineate the tract boundaries. To the north, the tract is bounded by a mapped intermittent stream and two drainage ravines.

Ecological Considerations
Wildlife observed during the inventory include American crow, chipmunk, white-tailed deer, American toad, Eastern gray squirrel, opossum, raccoon, and various songbird and woodpecker species. A couple wildlife ponds are located just outside of this tract. Any management activities will avoid or enhance this feature.

The Division of Forestry has developed compartment level guidelines for important wildlife structural habitat features such as snags and legacy trees. Snags are standing dead or nearly dead trees. Snags provide value to a stand in the form of habitat features for foraging activity, den sites, decomposers, bird perching, and bat roosting. Snags eventually contribute to the future pool of downed woody material, which provides habitat for many ground-dwelling species and contributes to healthy soils. Legacy trees are live trees of a certain species and diameter class, that have potential future value to various wildlife species, if retained in the stand.

Current assessments indicate the abundance of these habitat features meet or exceed recommended maintenance levels.

A formal Ecological Review process, which includes a search of Indiana's Natural Heritage Database, is part of the management planning process. If Rare, Threatened, or Endangered species were found to be associated with this area, the activities prescribed in this guide will be conducted in a manner that will not threaten the population viability of those species or communities.

Invasive species noted in the tract include multiflora rose and Japanese stiltgrass. Multiflora rose was most prevalent along the fire lane. The stiltgrass appeared to be restricted to the fire lane only. While neither of the invasive species appear to be problematic at this time, they should be managed situationally. If not treated prior to management activities, they should be monitored following the harvest to minimize spread.

This is primarily an oak-hickory forest with a mixed hardwoods cover type along the drainages and in the central lowland valley. There is a four-acre patch of planted pine adjacent to Mail Route Road. Vines and multiflora rose were observed but they are not persistent and treatment is unnecessary.

Recreation
There are no designated recreational trails in this tract. Hunting is likely the primary recreational

activity within the tract. Mail Route Road is open seasonally to allow for access during legal hunting seasons. For public safety this tract would be temporarily closed to public use during active management. Upon completion of management activities, the tract would reopen to public use.

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

Tract Subdivision Description and Prescription
Mixed Hardwoods (16 acres)
The mixed hardwoods subdivision (i.e., cover type) is in the lowland valley in the center of the tract, and along some of the drainages that feed into the valley. Yellow poplar and northern red oak are the dominant overstory species, followed by species such as white oak, pignut hickory, sugar maple, white ash, blackgum and black cherry. Sugar maple and American beech are prevalent in the understory and are hindering oak and hickory establishment. Most of the yellow poplar on the tract are located within this subdivision; northern red oak is located throughout the tract but is most common along the mid and lower slopes where the mixed hardwoods and oak-hickory subdivisions converge.

The prescribed management activity for this subdivision is to conduct an improvement harvest removing poorly formed and declining trees to funnel more resources to healthier trees of better form and vigor. Group opening or patch cuts may also be used to further promote regeneration.

Conifer (4 acres)
The planted pine subdivision is in the southern tip of the tract on a broad section of ridgetop, adjacent to Mail Route Road. White pine, in the small to medium sawtimber range, make up the majority of the overstory. Shortleaf pine in the pole size class was also collated in the inventory. The inventory estimated 29,700 bd.ft. of white pine sawtimber throughout the tract. The prescribed management activity is to harvest the pine to promote native hardwood regeneration through patch cut and group openings.

Dry Oak-Hickory (61 acres)
Most of the tract falls under this subdivision, which is dominated by chestnut oak particularly on the high ridgetop. Other species include white oak, northern red oak, American beech, pignut hickory, bitternut hickory, yellow poplar, sassafras, and scarlet oak. The high ridgetops include typical poorly formed low forked chestnut oak with high stocking. A light to moderate thinning is recommended, particularly in areas where regeneration is present. This will improve vigor and promote all the remaining trees and advanced regeneration to be released. Larger canopy gaps or patch cuts may also benefit the area and promote young forests. In some areas mature maple and beech are shading average to good quality oak and hickory and should be released. A light to moderate thinning in these areas will release the oak and hickory. These canopy gaps or patch-cut openings will promote regeneration and allow for more vigorous crown expansion and growth of the residual trees. The midstory is typically dominated by sugar maple, with some pignut hickory and white oak poles mixed in. Oak is often the primary regenerating species, followed by sassafras, red maple, pignut hickory, pawpaw, and yellow poplar. There is excellent advance oak and hickory regeneration on the drier aspects; however, it is hindered by a dense

understory of sugar maple, red maple, American beech, and greenbrier. To maintain the oak-hickory component in this subdivision, timber stand improvement (TSI) and prescribed fire should be applied to reduce the maple-beech mid- and understory and promote the establishment of oak and hickory seedlings.

The current forest resource inventory was completed in2018, by Ros Danson. A summary of the estimated tract inventory results is located in the table below.

SPECIES	# Sawtimber Trees	TOTAL VOLUME
Chestnut Oak	1,344	291,780
Yellow Poplar	317	103,710
Northern Red Oak	151	47,240
Black Oak	305	46,290
White Oak	169	43,820
Eastern White Pine	131	29,700
Pignut Hickory	76	10,160
White Ash	18	8,810
Shagbark Hickory	15	3,060
Black Cherry	12	1,190
TRACT TOTALS	**2,420**	**598,070**

Tract Prescription and Proposed Activities

The proposed management activity is to conduct an improvement harvest to improve the overall health and quality of the tract. This harvest should occur within the next five years utilizing a combination of single-tree and group selection methods. The purpose of single-tree selection is to remove drought stressed, damaged trees, mature and over-mature trees, and other intermediate trees needed to improve the overall vigor and health of the tract. Thinning is necessary in areas of the oak-hickory subdivision with particularly high stocking, including the ridges where chestnut oak occurs in dense monocultures. Trees in the larger size classes that are declining should be removed through group selection or patch cuts to encourage better vigor of the residual stand. Other trees targeted for removal in either subdivision include mixed hardwoods that release oak or hickory trees and mature or over-mature trees with damage or in poor health due to age, disease, or other stressors. An oak shelterwood harvest and prescribed fire may also be necessary to maintain or increase the oak-hickory regeneration present in either subdivision. The planted pine trees should be removed to regenerate native hardwoods. Group selection or patch-cut openings should be created to facilitate the regeneration of shade intolerant species. The improvement harvest should avoid areas in the western section of the tract that are vulnerable to soil erosion and site degradation. The estimated volume to be removed is 100,000-188,500 bd.ft. or 1,234-2,327 bd.ft. per acre. This will reduce the stocking from 89% to 73%.

A TSI operation should occur within two years of the timber harvest. This will be done to complete any patch-cut openings; reduce the understory and competition from shade tolerant species; and release oak, hickory, and other crop trees in the remaining acreage. Some trees should be deadened to increase the number of snags that are available as wildlife habitat.

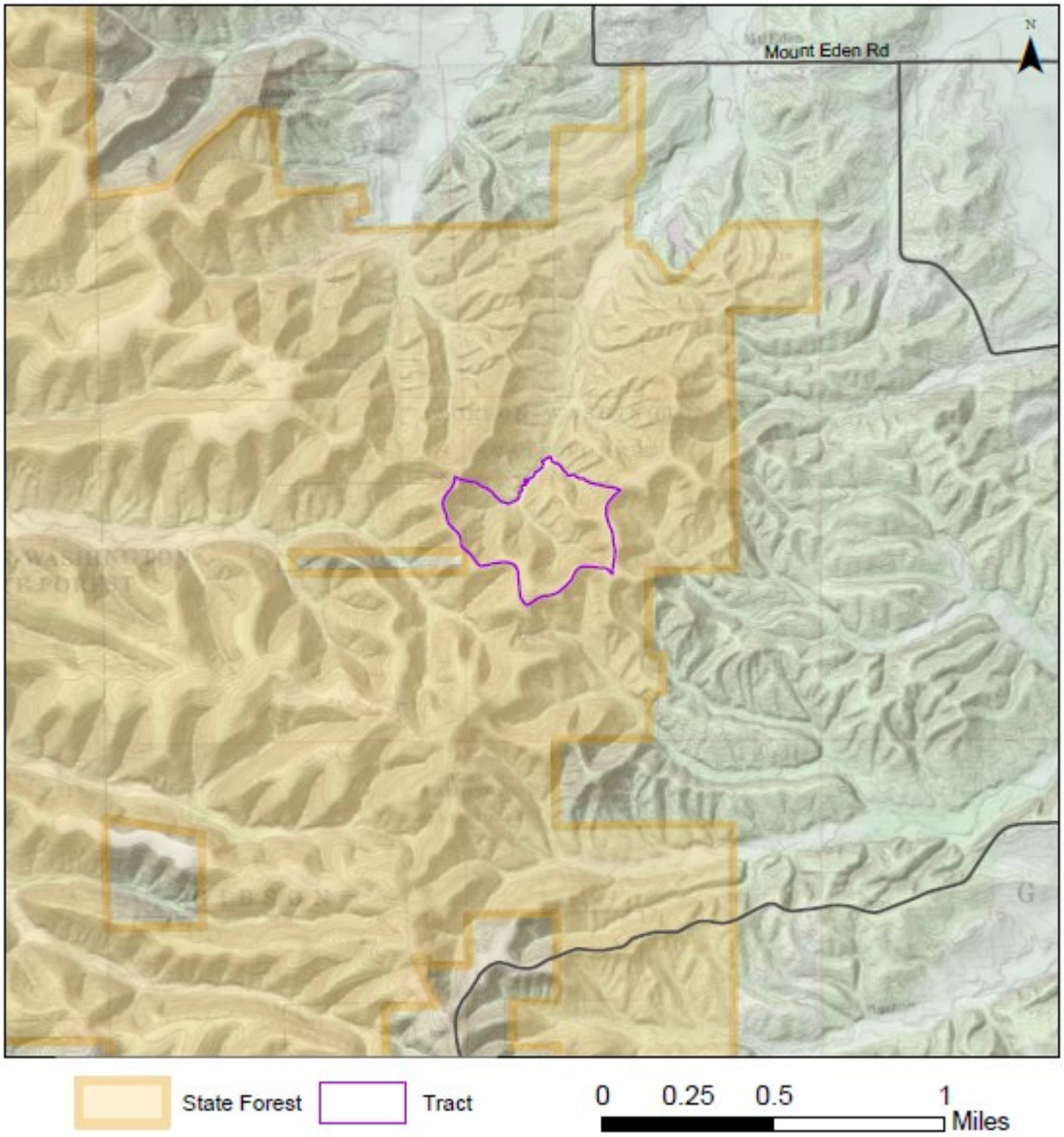
A fire regime should be implemented following post-harvest TSI. Prescribed fire administered during dominant periods can reduce the presence of shade tolerant species while improving ground conditions making them more favorable for oak and hickory regeneration.

Any invasive plant species present in patch-cuts or shelterwoods should be treated prior to the harvest. During and after completion of the timber harvest, best management practices (BMPs) will be implemented to minimize soil erosion.

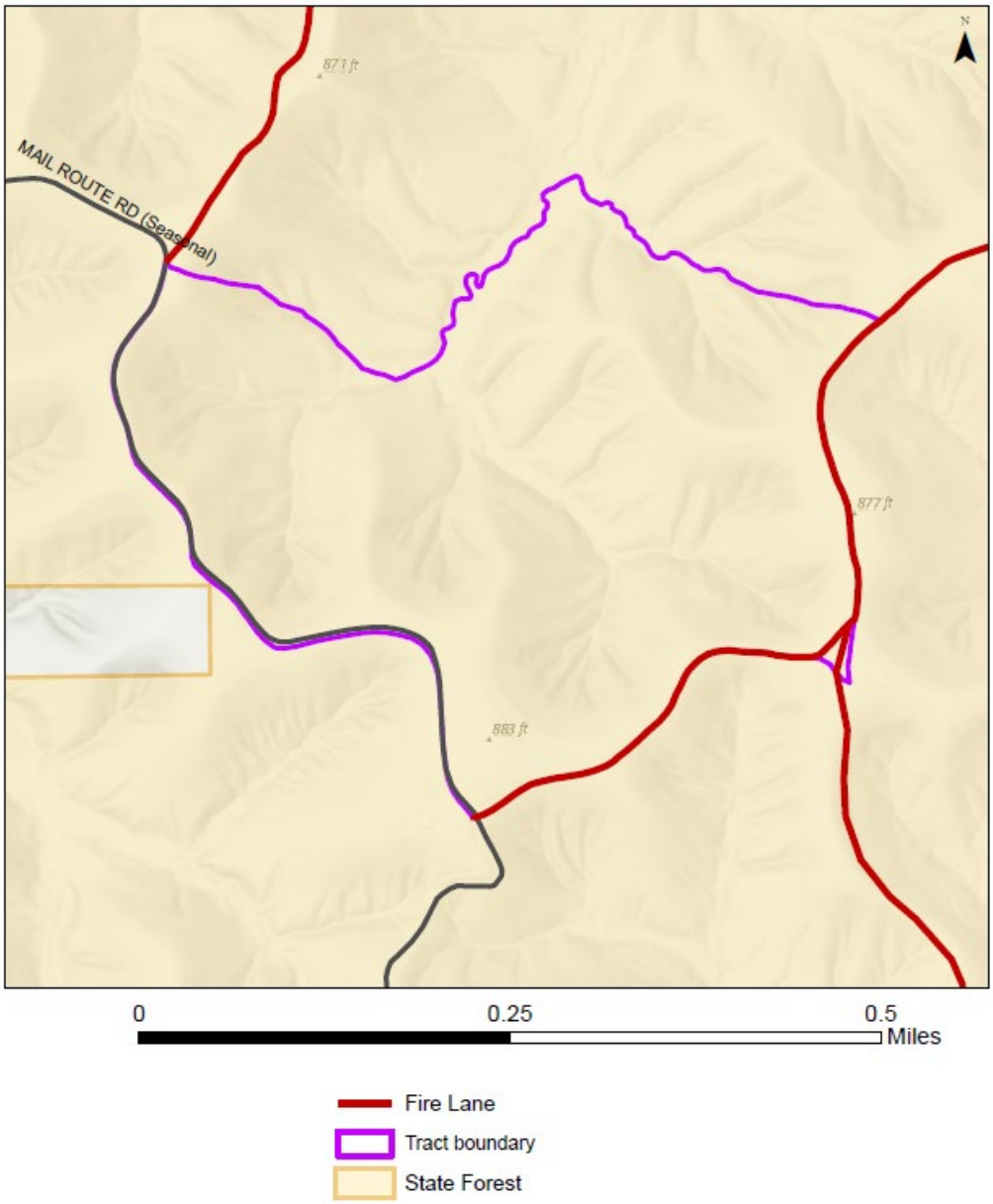
Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Mark and Sell Timber Sale	2026-2027
Pre-harvest TSI and invasive species work	2026-2027+
Timber harvest	2026-2031
Post-harvest TSI and invasive species work	1 to 2 years after harvest+
Prescribed fire regime	1 to 2+ years after post-harvest TSI
3-year regeneration review	Three years after harvest
Next forest inventory	2045

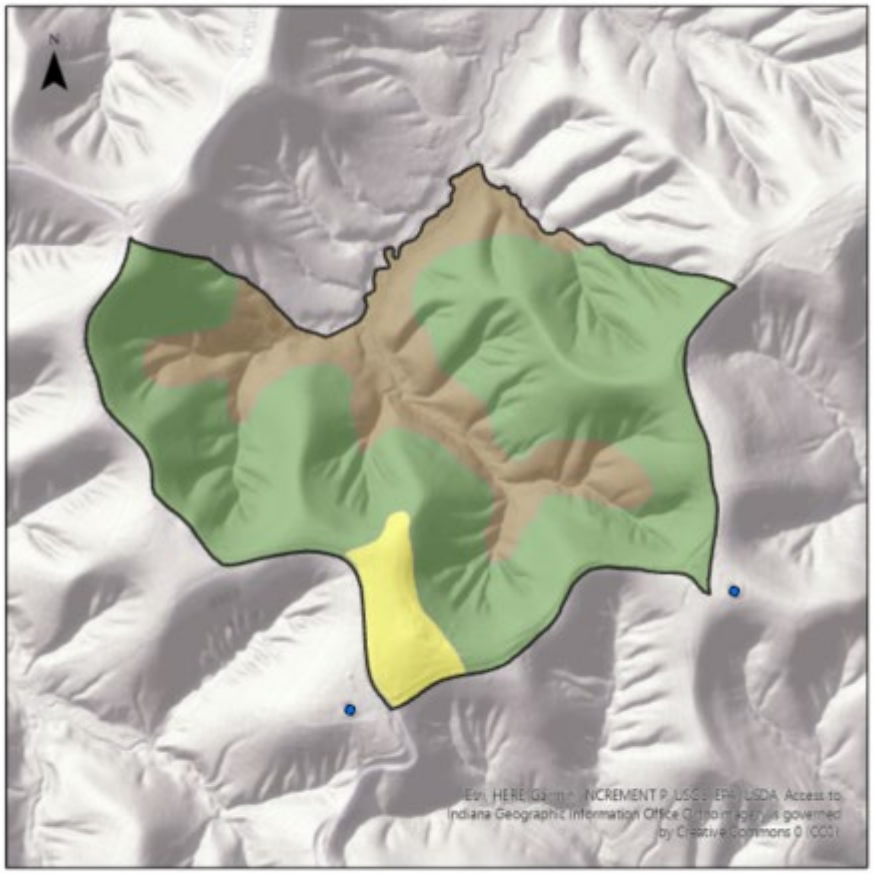
Jackson-Washington State Forest
Location Map
Compartment 11 Tract 12



Jackson-Washington State Forest
Compartment 11 Tract 12
Tract Map



Jackson-Washington State Forest
Compartment 11 Tract 12
Cover Types Map



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Legend

- Dry Oak-Hickory
- Mixed Hardwoods
- Conifer
- Tract Boundary
- Wildlife Ponds