Resource Management Guides
Yellowwood State Forest
30-day Public Comment Period (July 21, 2025 – August 19, 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 Yellowwood State Forest.

Compartment 1 Tract 5
Compartment 1 Tract 6
Yellowwood State Forest Storm Salvage Management

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.

Yellowwood State Forest	Compartment: 1	Tracts: 5
Forester: Cole Jones	Date: 10/9/2024	Acres: 80
Management Cycle End Year: 2044	Management Cycle Length: 20 years	

Location
Yellowwood State Forest compartment 1 tract 5, also known as 6420105, is located west of the intersection of T C Steele Road and Gilmore Ridge Road. The tract resides in Washington Township, Section 13, T8N R1E.

General Description
Oak-hickory and mixed hardwood forest covers the entirety of the tract. A creek drainage runs north through the center of the tract and eventually drains into Salt Creek. The topography of the tract is generally sloped and is composed of three finger ridges which branch off from Ferris Ridge.

History
- **Nov 1981** - Forester Duncan marked and sold 171,550 board feet (bdft) to Lloyd Alexander for $34,350.
- **Nov 1982** - Timber stand improvement (TSI) completed across the whole tract.
- **Apr 1983** - 100 black walnuts and 50 autumn olive planted in the log yard.
- **Jun 2000** – Forest inventory and management guide completed by Forester Kaina, no harvest recommended at the time.
- **Jun 2000** - TSI completed by Forester Kaina.
- **Oct 2024** – Forest inventory and management guide completed by Forester C. Jones.

Landscape Context
The tract is bordered on all sides but the east by other Yellowwood State Forest tracts. The surrounding landscape is oak-hickory and mixed hardwood forests. Outside of the state forest boundaries is a mix of forest and agricultural land, owned by the US Army Corps of Engineers (i.e., Monroe Lake) and private landowners. Landscape level threats include invasive plants/animals and development on private lands outside of state forest boundaries.

Topography, Geology and Hydrology
The general topography of this region consists of unglaciated, sharply dissected hills, narrow ridges and valleys. The underlying bedrock is Mississippian sandstone, shale, and siltstone. This tract lies within the Stephens Creek-North Fork Salt Creek subwatershed. Water resources within this hydrologic boundary are part of the North Fork Salt Creek watershed.

Riparian features (intermittent streams and drainages) are present on portions of the tract. General riparian management zone (RMZ) guidelines will be implemented in these areas in accordance with the *Indiana Logging and Forestry Best Management Practices 2022 BMP Field Guide.*

Soils
<u>BgF- Berks-Trevlac-Wellston complex, 20 to 70 percent slopes</u>
These moderately steep to very steep well drained soils are on hillsides in the uplands. They are

fairly well suited to trees. Erosion hazards and equipment limitations are main management concerns due to slope. Consideration should be given during sale planning and implementation of Best Management Practices for Water Quality. This complex has a site index of about 70 for northern red oak.

WaD- Wellston-Berks-Trevlac complex, 6 to 20 percent slopes
These moderately sloping to moderately steep, well drained soils are on side slopes and narrow ridgetops in the uplands. They are well suited to trees. Seedling mortality can be an issue on south facing Berks soils due to droughty conditions. This complex has a site index of about 70 for northern red oak.

Access
This tract is accessible via a cable gate off T C Steele Road. The gate is approximately 100 feet north of the intersection of T C Steele and Gilmore Ridge roads. Access within the tract is good, with no significant limitations to resource management.

Boundary
The tract is bordered by other Yellowwood State Forest tracts on all sides except the east, where T. C. Steele State Historic Site borders the state forest. The boundary was last inspected and painted in 2022.

Ecological Considerations
Wildlife observed within the tract includes various songbirds and woodpeckers, reptiles such as blue racers, and mammals such as gray squirrels and whitetail deer. Other wildlife signs were observed as well (e.g., fur, feathers, nests, etc.).

The mature forest in the tract provides good habitat for many wildlife species but is lacking in early successional habitat. Early successional habitat is well known for being crucial to the survival of state endangered species like ruffed grouse, but it provides benefits to other wildlife as well. Box turtles use the new growth for cover and food, while scarlet tanagers forage blackberry thickets for food. Silvicultural methods like clearcuts and patch-cut openings can increase wildlife diversity within the tract while also promoting the growth of valuable hardwood species like yellow-poplar and black cherry.

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 in all diameter classes.

The tract is mostly mature hardwood forest, with dry oak-hickory species on the ridgetops, mesic

oak-hickory species on the slopes, and mixed hardwoods in the creek bottom. Advance oak regeneration is present but only in any real abundance on the upper slopes and ridges, where xeric soils restrict competition from less drought tolerant species.

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
Although no permanently established recreation trails or developments are present in this tract, there are still several recreational opportunities.

Hunting is permitted and this area also offers opportunities for certain types of gathering and wildlife viewing.

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 - 32 acres
Dry oak-hickory forests (i.e., cover types) often occur on high ridges and south slopes, and are dominated by chestnut oak, scarlet oak, and black oak. White oak, pignut hickory, and shagbark hickory occur here as well, but less frequently. Dry oak-hickory stands are typically managed in conjunction with mesic oak-hickory stands, as they usually border each other. Prescribed fire, TSI, and timber harvesting all benefit dry oak-hickory regeneration.

Mesic Oak-Hickory - 45 acres
Mesic oak-hickory forests typically occur on slopes and ridges and are often dominated by species such as white oak, Northern red oak, pignut hickory, and shagbark hickory. Scarlet oak, black oak, and chestnut oak may be present, though not in such abundance that it would be considered a dry oak-hickory forest. The understory is typically composed of sugar maple, American beech, and other mixed hardwoods. Oak-hickory forests provide the greatest amount of diversity when compared to any other forest type. If oak-hickory forests are to be maintained, they require disturbance to halt natural succession. This is typically done through timber harvesting, TSI, prescribed fire, or a mix of the aforementioned management strategies. The oak-hickory forests are of generally good quality with good stocking, though there is little oak regeneration occurring in the understory.

Mixed Hardwoods - 3 acres
This cover type is found mainly in the creek bottom between the main ridges. Primary species include yellow-poplar, sugar maple, and red maple. Other species are present sporadically but in no real abundance, like American sycamore and blackgum. The understory is mostly ironwood, sassafras, maple, and beech.

The current forest resource inventory was completed on 10/9/2024 by Forester C. Jones. A summary of the estimated tract inventory results is in the table below.

Tract Summary Data (trees >11"DBH):

Species	# Sawtimber Trees	Total Bd. Ft.
Black Oak	470	171,628
Chestnut Oak	1,158	165,655
White Oak	522	161,957
Yellow-Poplar	419	129,304
Northern Red Oak	230	101,281
Pignut Hickory	217	63,784
Scarlet Oak	95	38,697
Sugar Maple	643	32,667
Red Maple	248	26,328
Blackgum	114	21,535
American Beech	104	19,213
American Sycamore	15	9,614
Bitternut Hickory	20	9,541
Shagbark Hickory	37	4,768
Total:	4,292	955,973

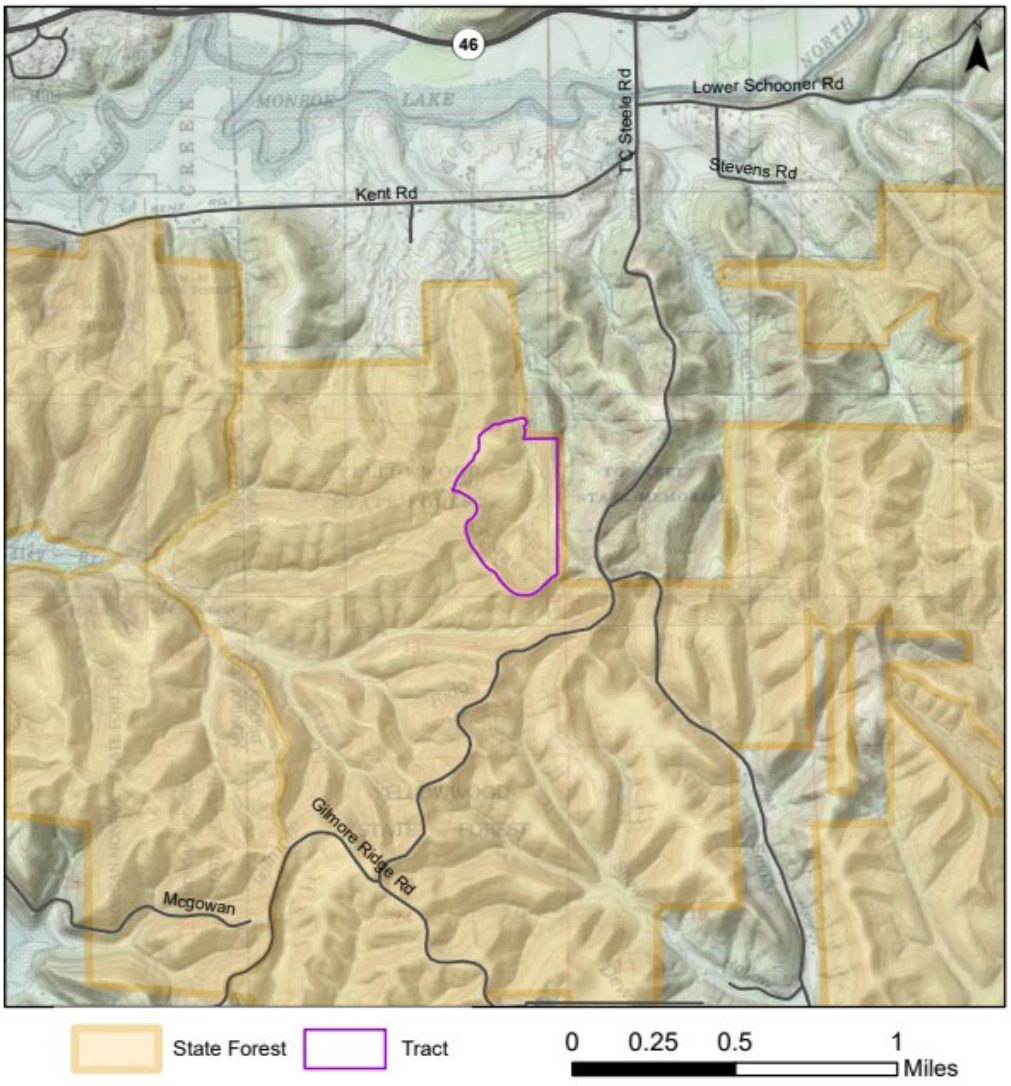
Summary Tract Silvicultural Prescription and Proposed Activities

A managed timber harvest in conjunction with TSI and invasive species control is recommended for this tract. The silvicultural methods will be mainly single-tree and group selection; however, patch-cut openings or an oak shelterwood may be incorporated in areas where the conditions are favorable. With proper management and adherence to best management practices (BMPs), adverse effects on water resources will be minimal.

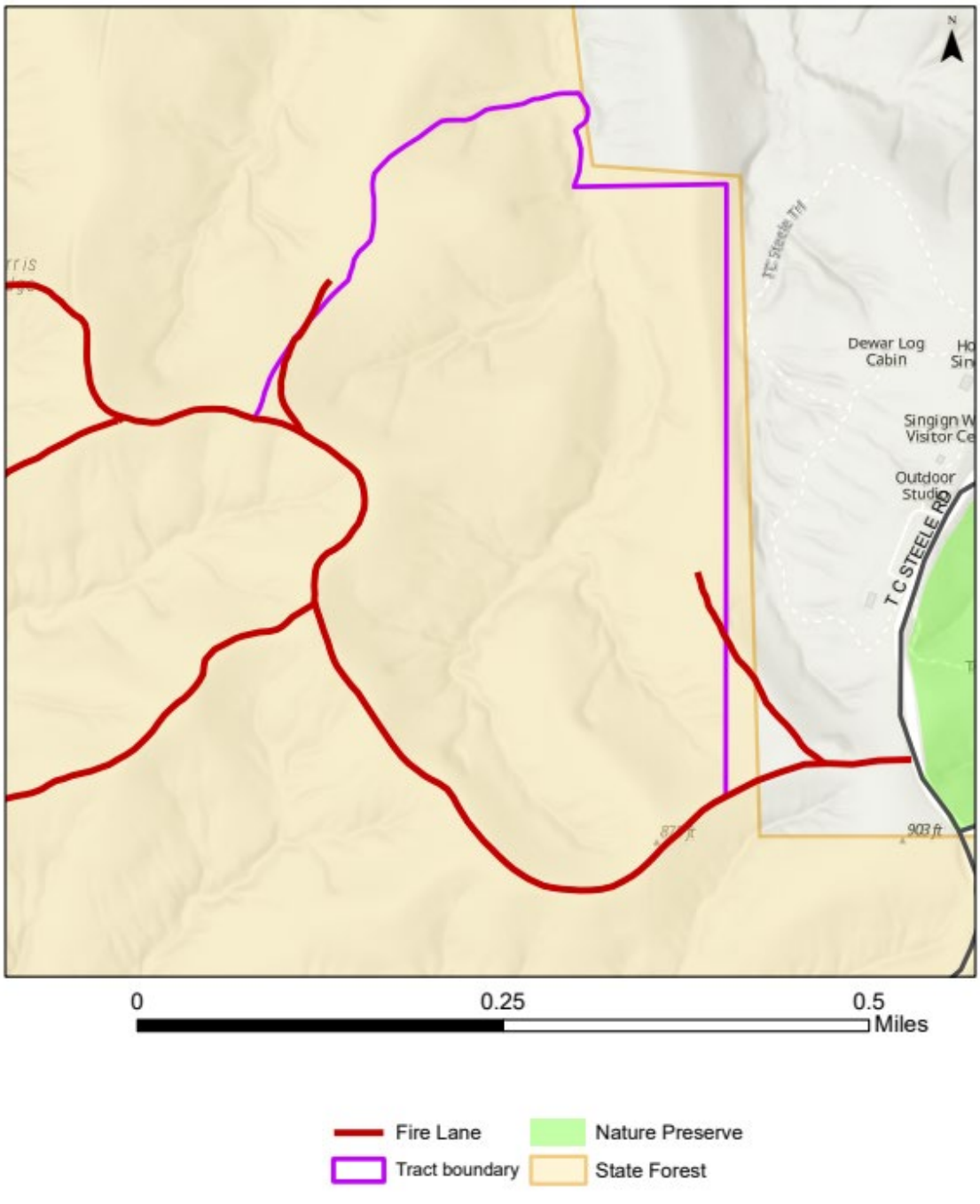
Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Timber Marking	2025
Road/log landing work	2025
Timber Sale	2025
Timber Sale Closeout	2026
Fire lane maintenance as needed	2026
BMP final review	2027
Post-harvest TSI/invasive species work	2027
3-year regeneration opening review	Three years after harvest
Next forest inventory	2044

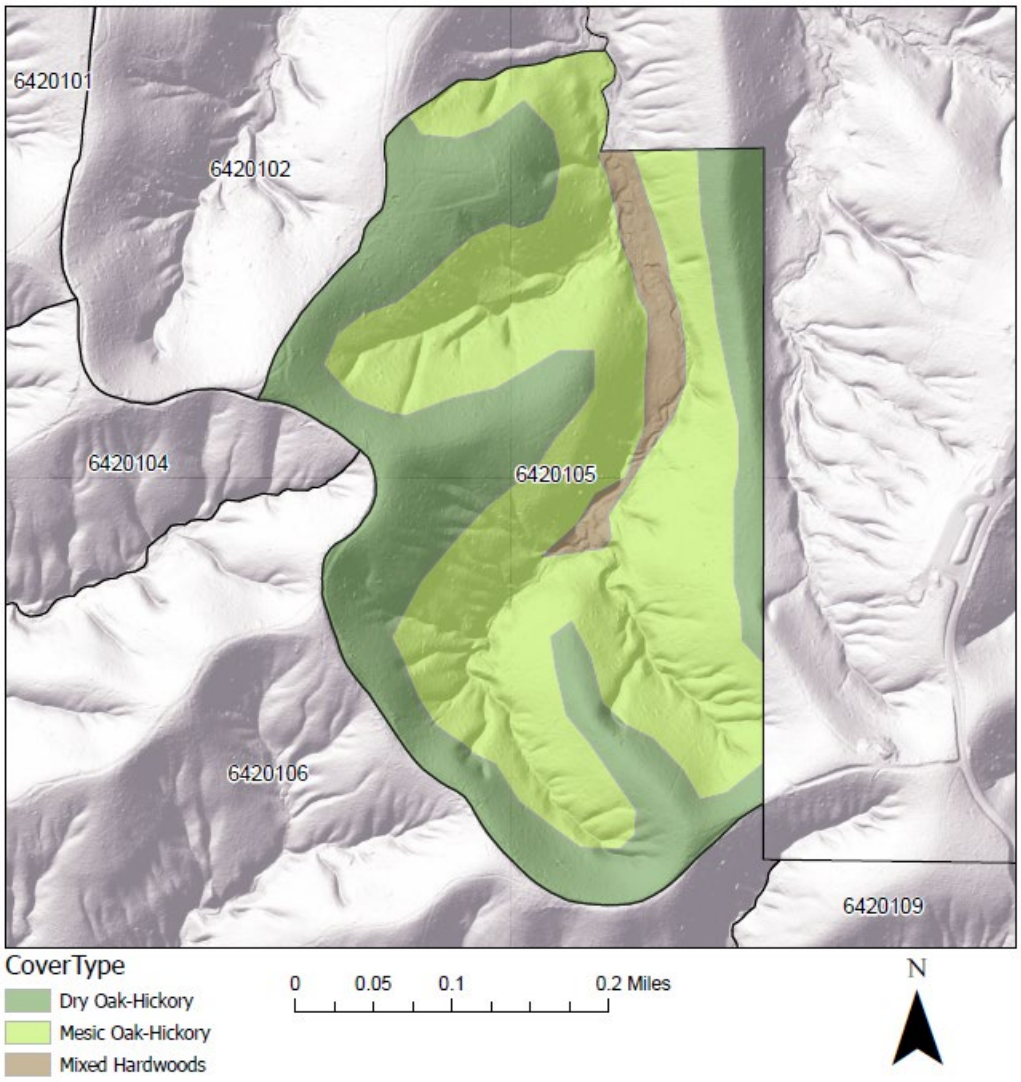
Yellowwood State Forest
Location Map
Compartment 1 Tract 5



Yellowwood State Forest
Compartment 1 Tract 5
Tract Map



Yellowwood State Forest
Compartment 1 Tract 5
Cover Types Map



Yellowwood State Forest	Compartment: 1	Tracts: 6
Forester: Cole Jones	Date: 10/7/2024	Acres: 172
Management Cycle End Year: 2044	Management Cycle Length: 20 years	

Location
Yellowwood State Forest compartment 1 tract 6, also known as 6420106, is located west of the intersection of T C Steele Road and Gilmore Ridge Road. The tract straddles the boundary between Brown and Monroe County, Indiana, and is bordered by Morgan-Monroe State Forest to the west. The tract resides in Washington Township, Section 13, T8N R1E.

General Description
The tract is covered by dry to mesic oak-hickory forest, although small patches of mixed hardwood forest and pine exist in the creek bottom. Two ridges run east-west, starting from a fire lane on Ferris Ridge.

History
- **1969-1970** – 90-acre clearcut.
- **October 1976** - CETA crew did timber stand improvement (TSI) across 23 acres.
- **July 1977** - Forester Williams cruised (i.e., forest inventory) 34 acres. Recommended tract be inventoried in 1990 and TSI.
- **August 1981** - Forester Gray completed 8 acres of TSI.
- **October 1995** - road maintenance/construction by forester Eckart.
- **May 1999** - 54,518 board feet (bdft) marked and sold by Forester Kaina in tract 4 (part of tract 4 used to be in tract 6).
- **June 2000** - Forester Kaina marked 5 acres of TSI, completed by contractor.
- **April 2016** - tract boundaries changed.
- **January 2018** - forest inventory completed by Forester Potts.
- **September 2024** - forest inventory completed by Forester C. Jones.

Landscape Context
The tract is bordered on three sides by Yellowwood State Forest and Morgan-Monroe State Forest to the west. The surrounding landscape is oak-hickory and mixed hardwood forests. Outside of the state forest boundaries is a mix of forest and agricultural land, owned by the US Army Corps of Engineers (i.e., Monroe Lake), and private landowners. Landscape level threats include invasive plants/animals and development on private lands outside of state forest boundaries.

Topography, Geology and Hydrology
The general topography of this region consists of unglaciated, sharply dissected hills, narrow ridges and valleys. The underlying bedrock is Mississippian sandstone, shale, and siltstone. This tract lies within the Stephens Creek-North Fork Salt Creek subwatershed. Water resources within this hydrologic boundary are part of the North Fork Salt Creek watershed.

Riparian features (intermittent streams and drainages) are present on portions of the tract. General riparian management zone (RMZ) guidelines will be implemented in these areas in

accordance with the *Indiana Logging and Forestry Best Management Practices 2022 BMP Field Guide.*

Soils

WaD- Wellston-Berks-Trevlac complex, 6 to 20 percent slopes

These moderately sloping to moderately steep, well drained soils are on side slopes and narrow ridgetops in the uplands. They are well suited to trees. Seedling mortality can be an issue on south facing Berks soils due to droughty conditions. This complex has a site index of about 70 for northern red oak.

BgF- Berks-Trevlac-Wellston complex, 20 to 70 percent slopes

These moderately steep to very steep well drained soils are on hillsides in the uplands. They are fairly well suited to trees. Erosion hazards and equipment limitations are main management concerns due to slope. Consideration should be given during sale planning and implementation of Best Management Practices for Water Quality. This complex has a site index of about 70 for northern red oak.

Access

This tract is accessible via a cable gate off T C Steele Road. The gate is approximately 100 feet north of the intersection of T C Steele and Gilmore Ridge roads. Access within the tract is good, with no significant limitations to resource management.

Boundary

The tract boundaries adjoin other State Forest tracts and are generally defined by deep ravines and mapped intermittent streams.

Ecological Considerations

Various species of wildlife were observed within the tract, such as eastern box turtles, eastern racers, eastern gray squirrels, blue jays, and red-headed woodpeckers. The 90-acre clearcut completed in 1970 would have created excellent early successional habitat for the first 20 years of regeneration, providing forage and cover for species such as ruffed grouse, American woodcock, eastern box turtles, and scarlet tanagers. The clearcut has since transitioned into a mid-successional oak forest and provides habitat to species such as squirrels, deer, and turkey. Early successional habitat is currently lacking within the tract, although areas of chestnut, black, and scarlet oak mortality on south slopes have created canopy gaps and pockets of regeneration suitable for red headed woodpeckers and various bat 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 in all diameter classes.

The dominant plant community in the tract is dry to mesic oak-hickory forest. Invasive species observed include Autumn olive, Japanese honeysuckle, bush honeysuckle, and Japanese stiltgrass.

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 major recreational uses of the tract are hunting, foraging, and wildlife watching. No designated recreational trails exist within or around the tract. Management activities will have either no effect on these recreational uses or a positive effect. In the event of active timber management, the tract will be temporarily close to public access 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
Dry Oak Hickory - 76 acres
This subdivision is dominated by oak-hickory species adapted to dry soils, such as chestnut oak, scarlet oak, and black oak. White oak, pignut hickory, and shagbark hickory are present but found sporadically. Greenbrier and lowbush blueberry are common ground cover plants. This cover type occurs primarily on ridges and slopes with a south or west aspect.

Much of the 90-acre clearcut from 1970 has succeeded to middle aged forests of chestnut and scarlet oak. Bigtooth Aspen likely regenerated prolifically following completion of the clearcut, as pockets of tall aspen trees are still present above the smaller oaks. Many of the short-lived aspens are blown down or dying out, making way for the chestnut and scarlet oak in the process. Areas of dry oak-hickory forest within the old clearcut should be harvested lightly, if at all. The focus of a harvest would be to thin out the chestnut and scarlet oaks, favoring individuals of these species with better form and species of lesser abundance, such as white oak and pignut hickory. TSI is recommended either after the harvest or in place of the harvest.

The remaining dry oak-hickory forest is mature timber on ridge tops and slopes. These areas should be harvested to capture the significant mortality occurring in these areas. Snags are important for wildlife habitat, but widespread tree mortality can be a sign of spreading disease. Many of these are caused by naturally occurring pests and pathogens native to Indiana. However, some mortality can be attributed to invasive pests and a sanitation harvest can stop the spread of disease and mortality throughout the stand. Advance oak-hickory regeneration is present and with active management, the stand should remain an oak-hickory forest. Active management within these areas would be timber harvesting, TSI, and prescribed fire or a combination of these

methods. Patch-cut openings would provide valuable early successional habitat. Given the prevalence of oak-hickory advance regeneration, any openings created would likely regenerate to an oak-hickory forest with a bigtooth aspen component.

Mesic Oak-Hickory - 80 acres
This subdivision (i.e., cover type) is defined by a dominance of oak-hickory species adapted to more mesic soils. The typical oak species includes white oak, northern red oak, and occasionally chinkapin oak. Black, scarlet, and chestnut oak are present but not in such abundance that it would be considered a dry oak-hickory stand. Hickory species present include shagbark and pignut hickories, with bitternut hickory more commonly found on the lower slopes. Other common species in the overstory include yellow-poplar, sugar maple, American beech, and American basswood. This cover type often occurs on east and north facing slopes.

The understory of this subdivision is dominated by shade tolerant species such as American beech, sugar maple, ironwood, and red maple. Mesic oak-hickory forests have better soils than that of a typical dry oak-hickory forest, and a closed oak canopy doesn't provide enough light for oak-hickory regeneration to grow past the browse line. Shade tolerant species may exist in the understory for decades. Without natural or human caused disturbance, these forests follow the natural succession process. Over time, oaks, hickories, and other species such as yellow-poplar die out and are replaced by beech-maple forests. While beech-maple forests are an important forest type in Indiana, they are inferior to oak-hickory forests in terms of ecological diversity. Oak-hickory forests also contain some of the most commercially important species in the Eastern US. Continuous forest inventory (CFI) data suggests that much of our oak-hickory forests are succeeding into beech-maple forests, so maintaining this ecologically and commercially valuable resource is a priority.

Timber management, along with prescribed fire and TSI, is an effective way to maintain oak-hickory forests. Timber harvesting allows more light to reach the forest floor, while prescribed fire reduces understory competition and removes the thick leaf layer impeding acorns and hickory nuts from germinating in the soil. TSI further reduces competition in the midstory and creates snags which benefit a variety of Indiana wildlife species. All these management processes work in conjunction to recruit new oak-hickory seedlings and allow them to grow to be the next overstory trees. An oak shelterwood harvest with fire and TSI is a proven way to maintain an oak-hickory forest and provide an open woodland structure uncommon in today's Indiana forests. Bird species such as red-headed woodpeckers and eastern whip-poor-wills need this type of woodland structure. Various bat species benefit greatly from increased numbers of snags for roost habitat and an open mid-canopy from which to hunt for insects.

Mixed Hardwoods - 16 acres
In this subdivision, none of the other hardwood types definitively describe the species mix. Dominant species here may include yellow-poplar, cherry, or elm, either singly or in combination. It may include species or species groups from the other types that are not in dominance. Here, other species present include American sycamore, red maple, and Virginia pine. The Virginia pine is found in a small area next to the creek and was likely planted there 60-80 years ago. It is being outcompeted by native hardwoods and cannot be considered a dominant overstory tree.

Many mixed hardwood forests (especially on flat ground) were once farmed or pastured by settlers. These old farmsteads have long since been abandoned and fast growing, shade intolerant species such as yellow-poplar, black cherry, and American sycamore. A few areas in this tract next to the creek were likely abandoned fields and farmsteads.

Areas of mixed hardwood forest rarely benefit from a prescribed fire, especially if they are situated next to creek beds as these are. Portions of these areas may be included in prescribed fire plans for logistical reasons.

Timber harvesting and TSI are useful tools for managing mixed hardwood forests. Thinning out the timber allows the remaining trees to grow faster and healthier, and small openings allow new growth to replace overmature timber. Some areas may not be harvested and instead be allowed to grow until the next management cycle.

The current forest resource inventory was completed on 10/7/2024 by Forester C. Jones. A summary of the estimated tract inventory results is in the table below.

Tract Summary Data (trees >11"DBH):

Species	**# Sawtimber Trees**	**Total Bd. Ft.**
Chestnut Oak	3,458	484,005
White Oak	2,133	355,213
Scarlet Oak	1,108	139,605
Yellow-Poplar	720	126,360
Black Oak	275	91,747
Northern Red Oak	491	78,572
Pignut Hickory	322	67,733
American Sycamore	208	32,327
American Beech	194	25,143
Sugar Maple	399	22,322
Virginia Pine	116	19,300
Shagbark Hickory	52	18,954
Bigtooth Aspen	291	12,617
Chinkapin Oak	41	11,945
Red Maple	132	11,691
Blackgum	51	8,882
Bitternut Hickory	51	7,765
Black Walnut	57	7,391
Black Cherry	87	4,774
Total:	10,185	1,526,346

Summary Tract Silvicultural Prescription and Proposed Activities

A timber harvest is prescribed for this tract. The timber harvest would include a combination of harvesting methods, including single-tree and group selection, oak shelterwood, and patch-cut openings. BMP as defined by the 2022 BMP field guide will be followed. BMPs minimize the impact of timber harvesting to reduce soil erosion and sedimentation into local watersheds.

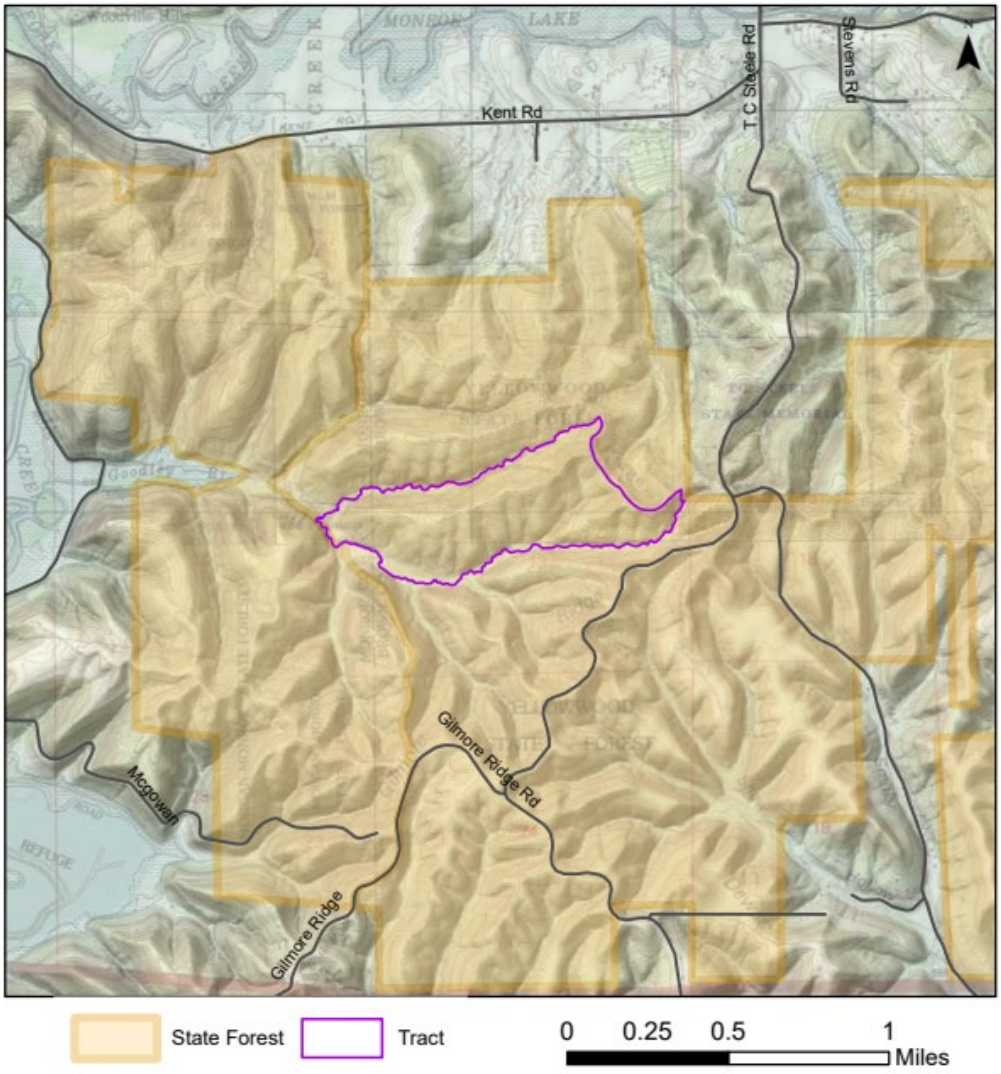
A prescribed fire is recommended for this tract. This would be part of a larger prescribed fire encompassing parts of neighboring tracts. Prescribed fire would be implemented either before or after timber harvesting as time and state resources allow. Experienced professionals from the Division of Forestry will implement the burn in accordance with a written burn plan with defined parameters. One prescribed fire is often not enough to achieve the goals of oak-hickory regeneration, so the area will be monitored after the fire and evaluated for additional burns. necessary to achieve the desired goal of maintaining the oak-hickory landscape.

Post-harvest TSI is prescribed for this tract. The focus of TSI will be to release ecologically or commercially valuable trees from competition, complete openings, and create snags for wildlife habitat.

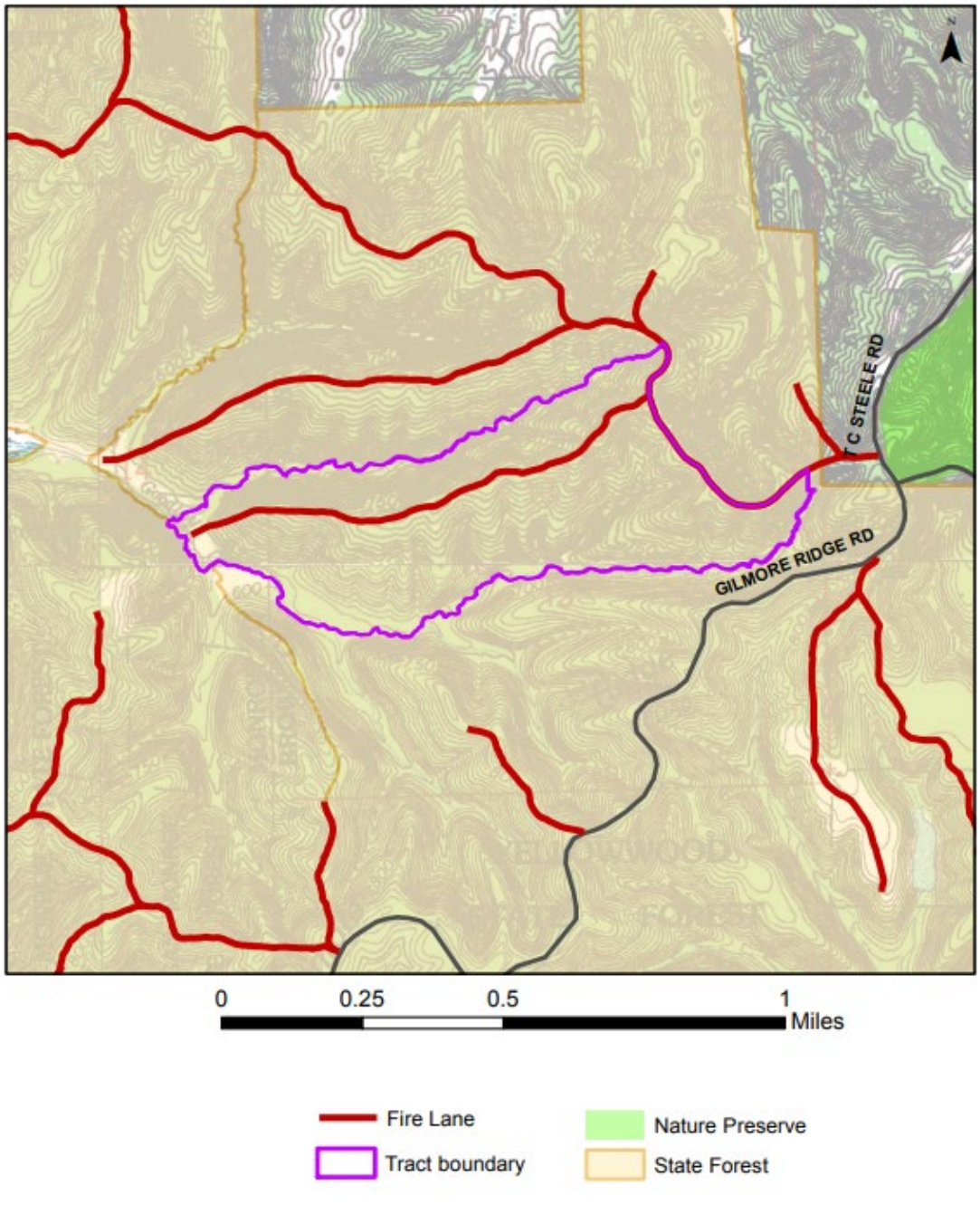
Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Timber Marking	2025
Timber Sale	2026-2028
Prescribed Fire	2026-2028
Post-harvest TSI/invasive species work	2028
BMP Review	2028
3-year regeneration opening review	Three years after harvest
Next forest inventory	2044

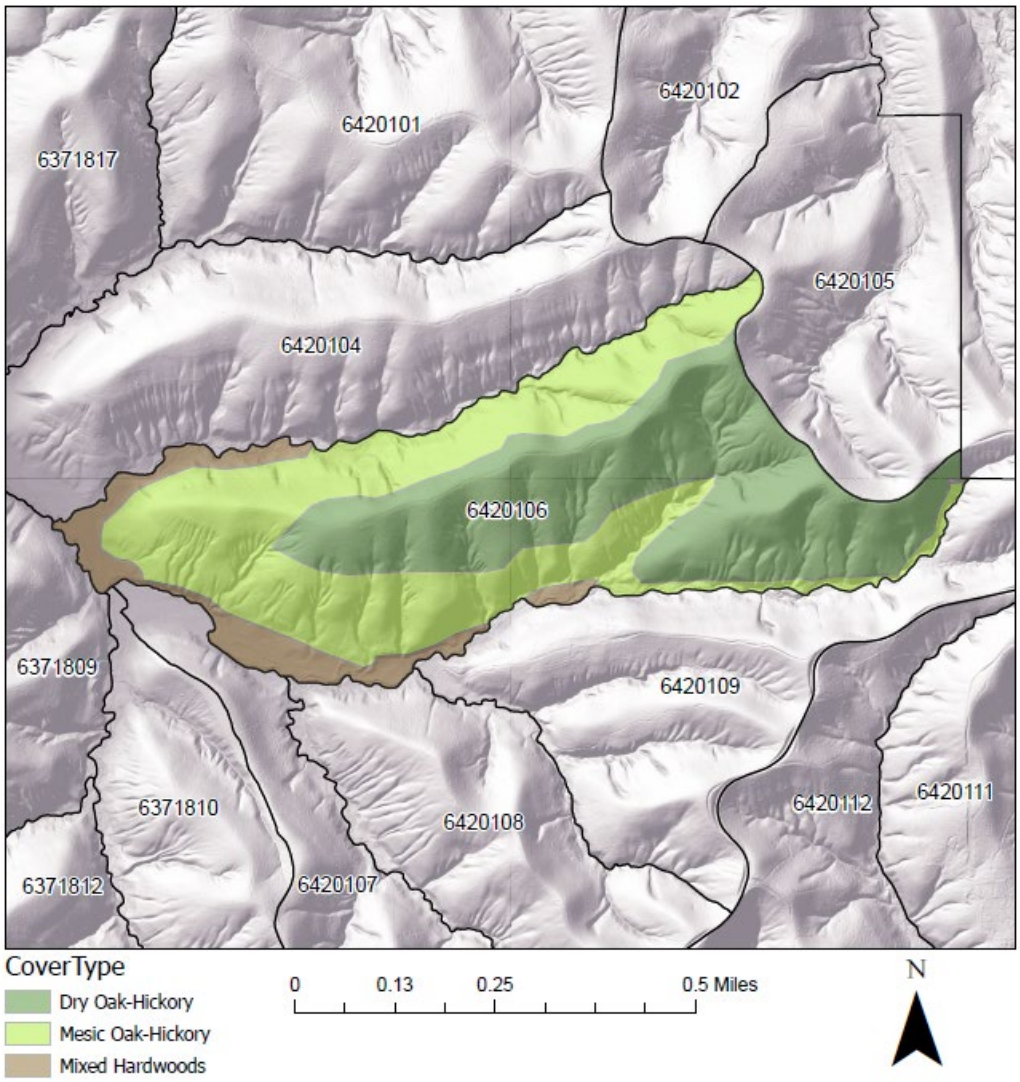
Yellowwood State Forest
Location Map
Compartment 1 Tract 6



Yellowwood State Forest
Compartment 1 Tract 6
Tract Map



Yellowwood State Forest
Compartment 1 Tract 6
Cover Types Map



Yellowwood State Forest
Storm Salvage Management

Yellowwood State Forest	Compartment: 3	Tracts: 11, 12, 15
Forester: Cole Jones	Date: 7/10/2025	Acres: 415
Management Cycle End Year: 2045	Management Cycle Length: 20 years	

Location
Yellowwood State Forest tracts 11, 12, and 15, also referenced as 6420311, 6420312, and 6420315, are located along Miller Ridge in Brown County, Indiana. Miller Ridge runs parallel to Crooked Creek Road.

General Description
The tracts are generally composed of steep hills and narrow valleys covered almost entirely by native hardwood forest.

History
- 1956 - Division of Forestry acquisition. Added to Yellowwood State Forest.
- 1986 - 121,739 board feet (bdft) sold in 557 trees in tract 12.
- 1997 - 61,443 bdft sold in 248 trees sold in tract 11.
- 2025 - On May 16, an EF2 tornado touched down in areas of southern Monroe and Brown County, Indiana. An area of Yellowwood State Forest along Miller Ridge experienced significant damage, causing many trees to break off or uproot in portions of tracts 16, 18, and 20; and a later discovery in tracts 11, 12, and 15.
- 2025 - On June 18, a line of severe thunderstorms passed through much of Indiana, causing widespread wind damage which downed a significant amount of timber within Yellowwood State Forest.

Landscape Context
The surrounding landscape is mostly closed canopy forest with some small homesteads along Crooked Creek Road. A portion of Crooked Creek Lake, part of Yellowwood State Forest, is in tract 11. Monroe Lake is located approximately 2 miles to the southwest of tract 11, as does the Hoosier National Forest.

Topography, Geology and Hydrology
The topography of the tracts is indicative of the Brown County Hills region of Indiana, which is characterized by deeply dissected uplands underlain by siltstone, shale, and sandstone. The topography ranges from moderate to very steep. Tracts 11 and 15 are in the Lake Monroe-Salt Creek Watershed while tract 12 is in the North Fork Salt Creek Watershed.

Soils
<u>BgF- Berks-Trevlac-Wellston complex, 20 to 70 percent slopes</u>
These moderately steep to very steep well drained soils are on hillsides in the uplands. They are fairly well suited to trees. Erosion hazards and equipment limitations are main management concerns due to slope. Consideration should be given during sale planning and implementation of Best Management Practices for Water Quality. This complex has a site index of about 70 for

northern red oak.

WaD- Wellston-Berks-Trevlac complex, 6 to 20 percent slopes
These moderately sloping to moderately steep, well drained soils are on side slopes and narrow ridgetops in the uplands. They are well suited to trees. Seedling mortality can be an issue on south facing Berks soils due to droughty conditions. This complex has a site index of about 70 for northern red oak.

Be- Beanblossom channery silt loam, occasionally flooded
This nearly level and gentle sloping, deep, moderately well drained soil is on flood plains, alluvial fans, and colluvial benches. It is fairly well suited to trees. Wet periods contribute to equipment limitations. Rooting depth is somewhat restricted for some trees, i.e. Black Walnut, due to coarse fragments in subsoil. This soil has a site index of 95 for yellow poplar.

TlB- Tilsit silt loam, 2 to 6 percent slopes
This gently sloping, deep, moderately well drained soil is on the tops of ridges in the uplands. It is well suited to trees. The rooting depth is limited by a fragipan present at a depth of 30 inches. This soil has a site index of 68 for white oak and 90 for yellow poplar.

Access
Access to and within the area is good. The Miller Ridge fire lane provides vehicle access to each tract and is accessible to the public from two parking lots on Crooked Creek Road.

Boundary
Tract 11 borders private property to the west. Boundaries were last painted in 2022.

Ecological Considerations
A portion of the Yellowwood Conservation Area is within tract 12. This High Conservation Value Forest (HCVF) was established due to the presence of the state threatened yellowwood tree (*Cladastris kentukea*). Per the 2019 Yellowwood Restoration and Recovery Management Guide, management activities within the boundaries of the HCVF must maintain or enhance the existing yellowwood population. Although the current state of damage to the yellowwood stands is unknown, the Restoration and Recovery Management Guide recommends management strategies in the event of storm damaged trees, referenced below.

"Whether during a harvest or a wind event, the potential still exists for some of the trees to be damaged. If any are, they should be coppiced and allowed to sprout prolifically as they do. These areas will then need to be re-entered on approximately 10 year intervals to perform release work to ensure the trees remain free to grow."

Due to the unexpected nature of tornadoes, it is not known how many dead standing trees (snags) are currently within the three tracts. However, the high level of disturbance undoubtedly increased their number by breaking off trees halfway up the stem in several locations. Snags are an important part of a healthy forest and benefit a multitude of wildlife species, including but not limited to red-headed woodpeckers and the state endangered Indiana bat.

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
Crooked Creek Loop mountain bike trail winds its way through tracts 11 and 15 while Miller Ridge mountain bike trail and D horse trail (accessible to hikers, mountain bikers, and horse riders) runs between each tract. Crooked Creek Lake provides recreation opportunities to paddlers and fishermen alike. Other recreational uses of the tracts include hunting, foraging, and wildlife watching.

The severe thunderstorm which impacted much of the area on June 18 added to the tornado damage sustained in neighboring tracts on May 16. Miller Ridge mountain bike trail, D horse trail, and Crooked Creek Loop were all affected by storm damage. While Miller Ridge would be used for potential salvage operations to move logs out, special care will be taken to preserve the character of Crooked Creek Loop. Any damage caused to the trail will be fixed during closeout operations. Crooked Creek Lake remains open and will not be impacted by salvage operations.

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

Silvicultural Prescription
Areas of severe wind damage exist throughout the three tracts, which caused large overstory trees to be uprooted or snapped off. While midstory trees are not typically tall enough to be affected by strong winds, many of them were crushed by much larger overstory trees coming down from above. Areas of severe damage will be identified and salvaged using an even-age management strategy (i.e., patch-cuts). All trees within these areas will be removed at the discretion of the harvesting crew. Damaged and downed trees will be harvested using a variety of silvicultural techniques. Due to safety and emergency response considerations, priority will be given to damaged trees along internal roads, trails and ridgetops where various types of recreation are most likely to occur. Some standing and/or undamaged trees may be marked to facilitate the logistical operation of harvesting equipment. Standing trees may be marked to facilitate the logistical operation of harvesting equipment.

Areas of less damage outside the even-age management areas will be marked to remove uprooted and heavily damaged trees, like single-tree and group selection harvest methods. Standing trees may be marked to facilitate the logistical operation of harvesting equipment.

While the total area for tracts 11,12, and 15 encompasses 415 acres, not all areas will be impacted by management, mainly those areas that sustained damage.

It is possible that individual yellowwood trees were damaged or outright broken by strong winds or falling trees. Any yellowwoods found within the harvest area will be flagged to avoid unnecessary skidding damage and assessed for survivability. Trees with minimal damage will be

left alone or released from competition, while trees with broken stems or heavily damaged crowns will be coppiced to take advantage of the tree's ability to resprout vigorously. Any coppiced stems will be released from nearby competition by cutting or girdling standing trees. While only part of the harvest area overlaps with the HCVF, this precaution will be taken across the entire harvest area. Yellowwoods share visual similarities with other native species and can easily be mistaken or missed. An inventory in 2019 logged GPS data for trees found across several stands, but scattered individuals outside of the HCVF is a possibility.

All harvested areas will receive post-harvest timber stand improvement (TSI) to complete openings, release desirable trees, and treat any invasive species found.

Inventory Data (trees >11"DBH):

Species Group	Volume/Acre
white oak	2,222
red oak	1,598
hickory	201
hard maple	373
soft maple	98
beech	52
blackgum	55
basswood	12
yellow-poplar	373
black walnut	12
other eastern soft hardwoods	206
other eastern hard hardwoods	32
TOTAL	**5,234**

Current Continuous Forest Inventory (CFI) data collected by the Division of Forestry suggests that Yellowwood State Forest compartment 3 contains an average of 5,234 board feet per acre. However, this is an average, and salvage operations in areas of severe damage are not expected to harvest exactly 5,234 bdft peracre. Many stems have been broken or split by strong winds, thus decreasing their merchantable volume or rendering them useless.

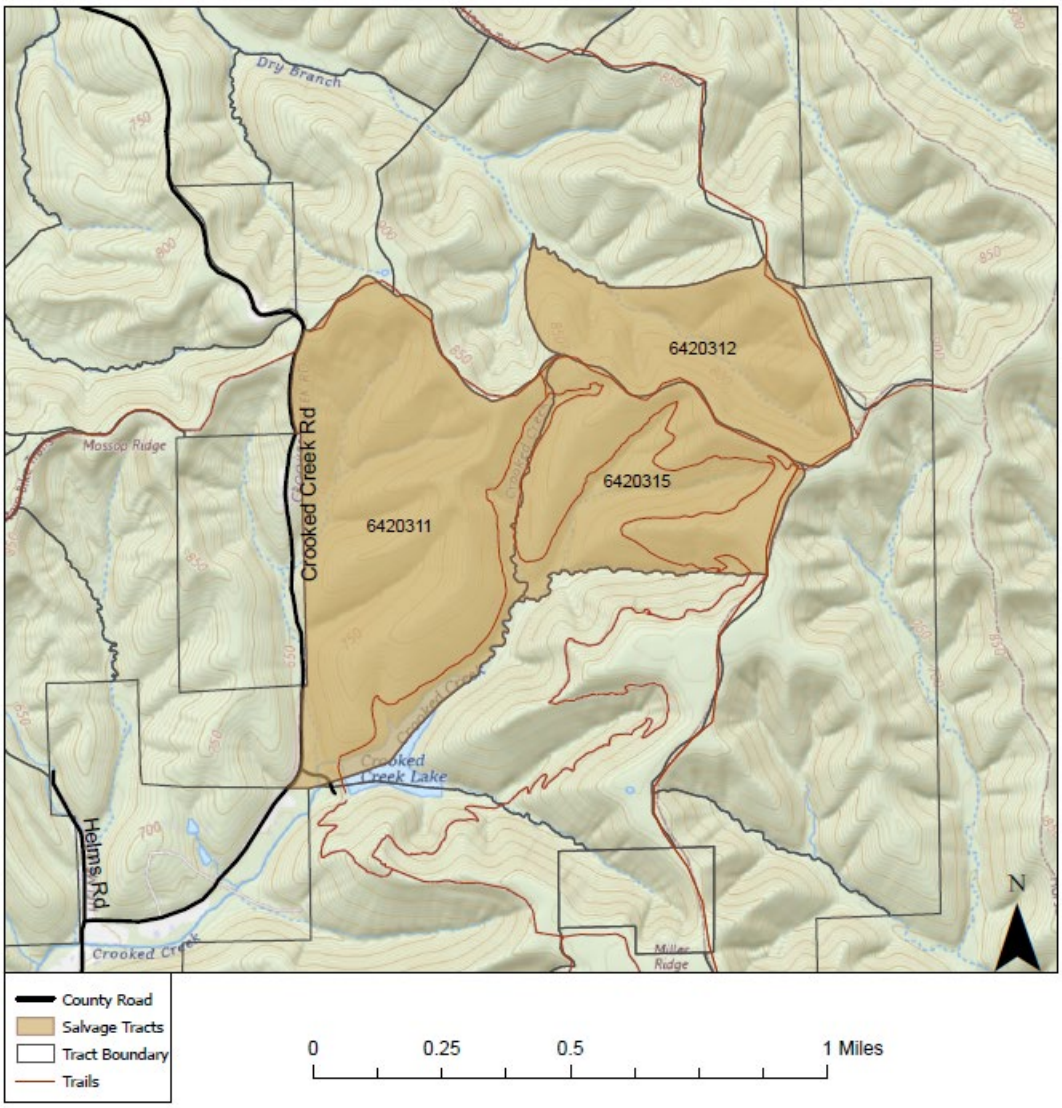
Summary Tract Silvicultural Prescription and Proposed Activities
The combined salvage areas will be harvested at the discretion of the DNR harvesting crew. The tracts affected by the storm will continue to receive management at regular intervals. Areas affected by the storm will continue to be monitored at regular intervals following their tracts' usual harvest rotations.

All harvesting operations will follow Indiana's Best Management Practices (BMPs) as stated in the current Indiana Logging and Forestry Best Management Practices 2022 Field Guide.

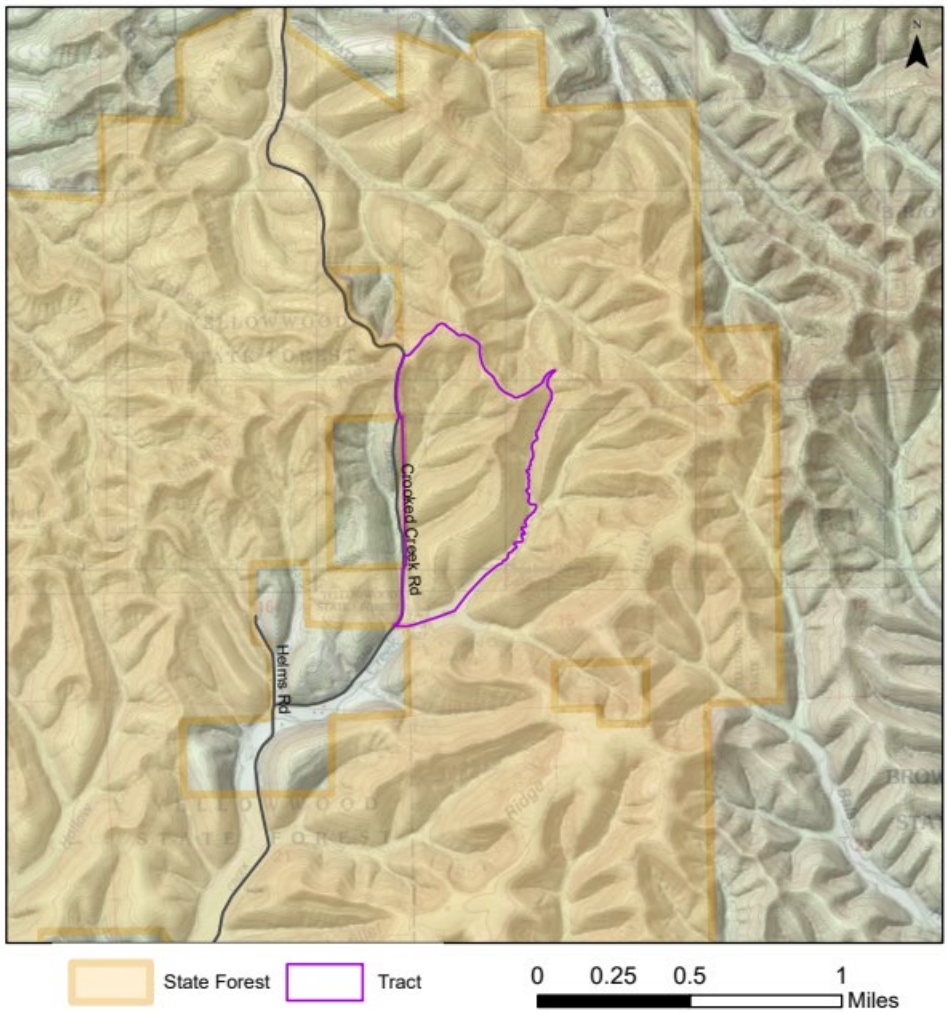
Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Salvage Harvest	2025-2026
Closeout Work	2026
Post-Harvest TSI and invasive work	2026-2027
Prescribed fire	2026+
Monitor until next forest inventory	Within 20 years

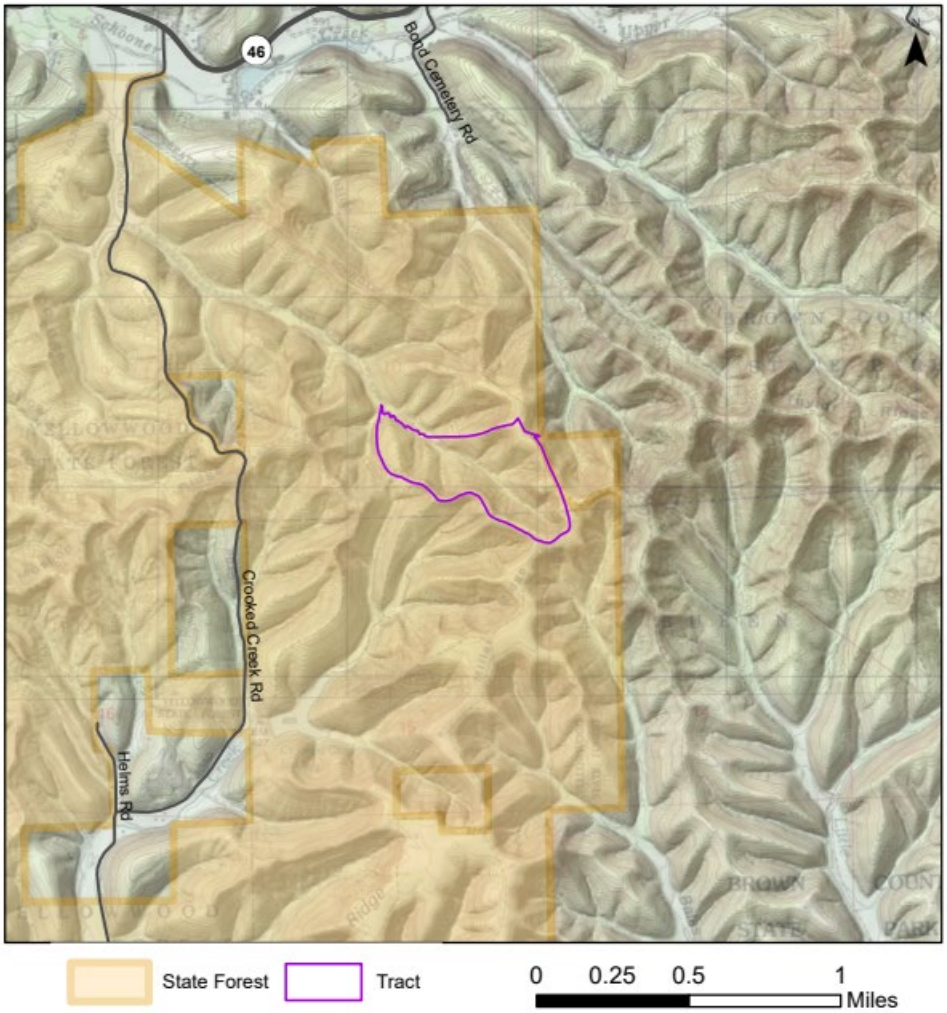
Yellowwood State Forest
Compartment 3 Tracts 11, 12, 15
Storm Salvage Area



Yellowwood State Forest
Location Map
Compartment 3 Tract 11



Yellowwood State Forest
Location Map
Compartment 3 Tract 12



Yellowwood State Forest
Location Map
Compartment 3 Tract 15