Resource Management Guides
Yellowwood State Forest
30-day Public Comment Period (June 11, 2025 – July 10, 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 RMG listed below and contained in this document is for storm salvage management at Yellowwood State Forest.

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
Storm Salvage Management

Yellowwood State Forest	Compartment: 3	Tracts: 16, 18, 20
Forester: Cole Jones	Date: 5/28/2025	Acres: 611

Location
Yellowwood State Forest tracts 16, 18, and 20, also known as 6420316, 6420318, and 6420320, 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 hills and valleys covered almost entirely by native hardwood forest. Small areas of pine forest persist from planting efforts by the Civilian Conservation Corps (CCC). These were likely planted sometime between 1930 and 1950.

History
- 1956 - Division of Forestry acquisition. Added into Yellowwood State Forest.
- 2006 - 117,860 bdft in 802 trees sold in tract 18.
- 2009 - 145,808 bdft in 711 trees sold in tract 20
- 2012 - 267,755 bdft in 1443 trees sold in tract 16.
- 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.

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 tracts 18 and 20. Monroe Lake is located approximately 2 miles to the southwest of tract 20, as is the Hoosier National Forest. Brown County State Park borders the east side of tract 16.

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 18 and 20 are in the Lake Monroe-Salt Creek watershed while tract 16 is in the Middle 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 of the tracts and is accessible to the public from two parking lots on Crooked Creek Road.

Boundary
Tract 20 borders private property to the west while tract 16 borders Brown County State Park to the east. Boundaries were last painted in 2022 and 2023, respectively.

Ecological Considerations
A portion of the Yellowwood Conservation Area is within each of the three tracts. 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
The Crooked Creek Loop mountain bike trail winds its way through tracts 18 and 20 while Miller Ridge mountain bike trail and D horse trail (accessible to hikers, mountain bikers, and horse riders) runs between tracts 16 and 18. Crooked Creek Lake provides recreation opportunities to paddlers and fishermen alike. Other recreational uses of the tracts include hunting, foraging, and wildlife watching.

The tornado which impacted much of the area on May 16 effectively blocked off part of Miller Ridge mountain bike trail, D horse trail, and Crooked Creek Loop. 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 damage exist throughout the three tracts. These areas are where the tornado touched down, causing most of the canopy to be removed during the tornado by uprooting or snapping large overstory trees. 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. Some trees may remain due to steep terrain, low utilization value, or wildlife habitat value. Tops and non-commercial trees will be left onsite to naturally decompose back into the soil.

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 16,18, and 20 encompasses 611 acres, the tornado only damaged select areas within each of the tracts. The total area will not be harvested, only those areas that sustained significant damage will be harvested. Tract 21, which is east of tract 20, is the Crooked Creek Nature Preserve. This state dedicated nature preserve did sustain tornado damage but will not be included in the salvage operation.

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**

Continuous Forest Inventory (CFI) data 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 board feet per acre. Many stems have been broken or split by the tornado, 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. Areas outside of the marked harvest areas will not receive management activities. The tracts affected by the tornado will continue to receive management at regular intervals, outside of the areas of severe damage. Areas affected by the tornado will continue to be monitored at regular intervals following their tracts' usual harvest rotations.

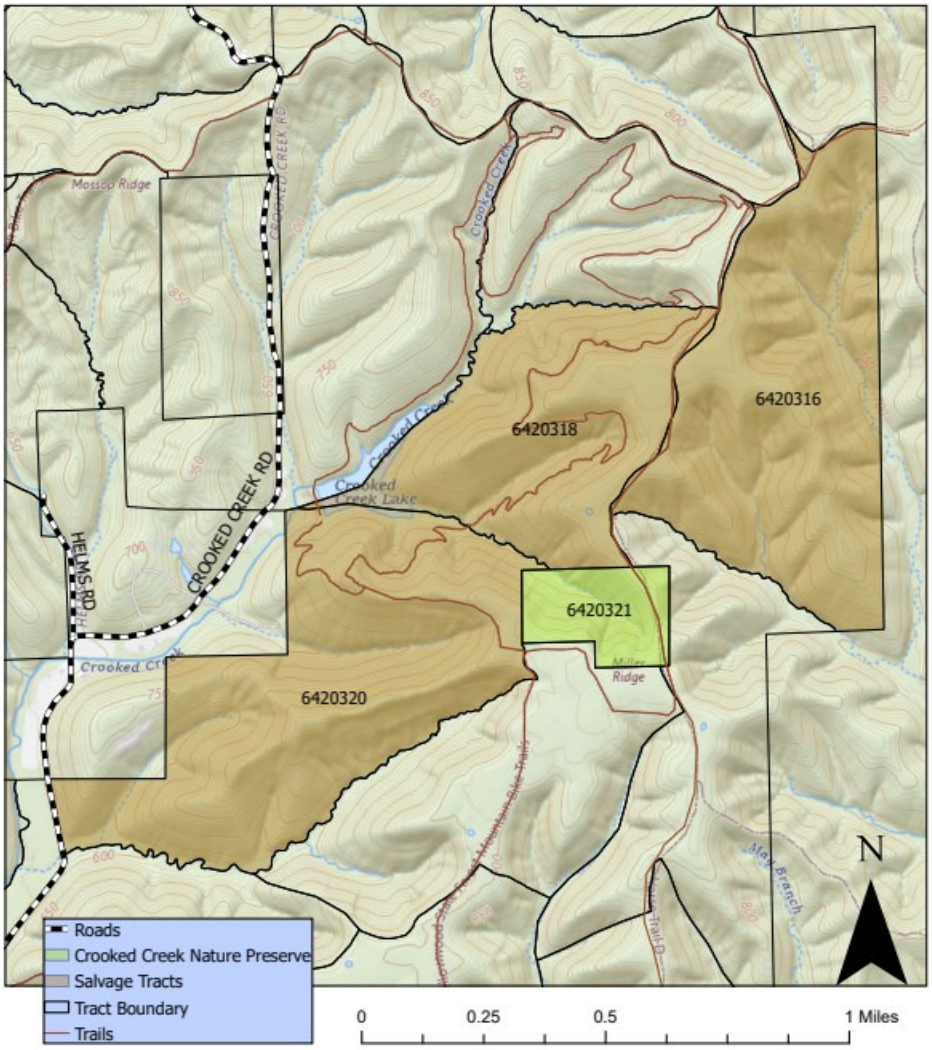
All harvesting operations will follow Indiana's Best Management Practices (BMPs) as stated in the current Indiana Logging and Forestry Best Management Practices 2022 Field Guide.

Prescribed fire may be used as a silvicultural tool following the harvest operation, if determined to be necessary.

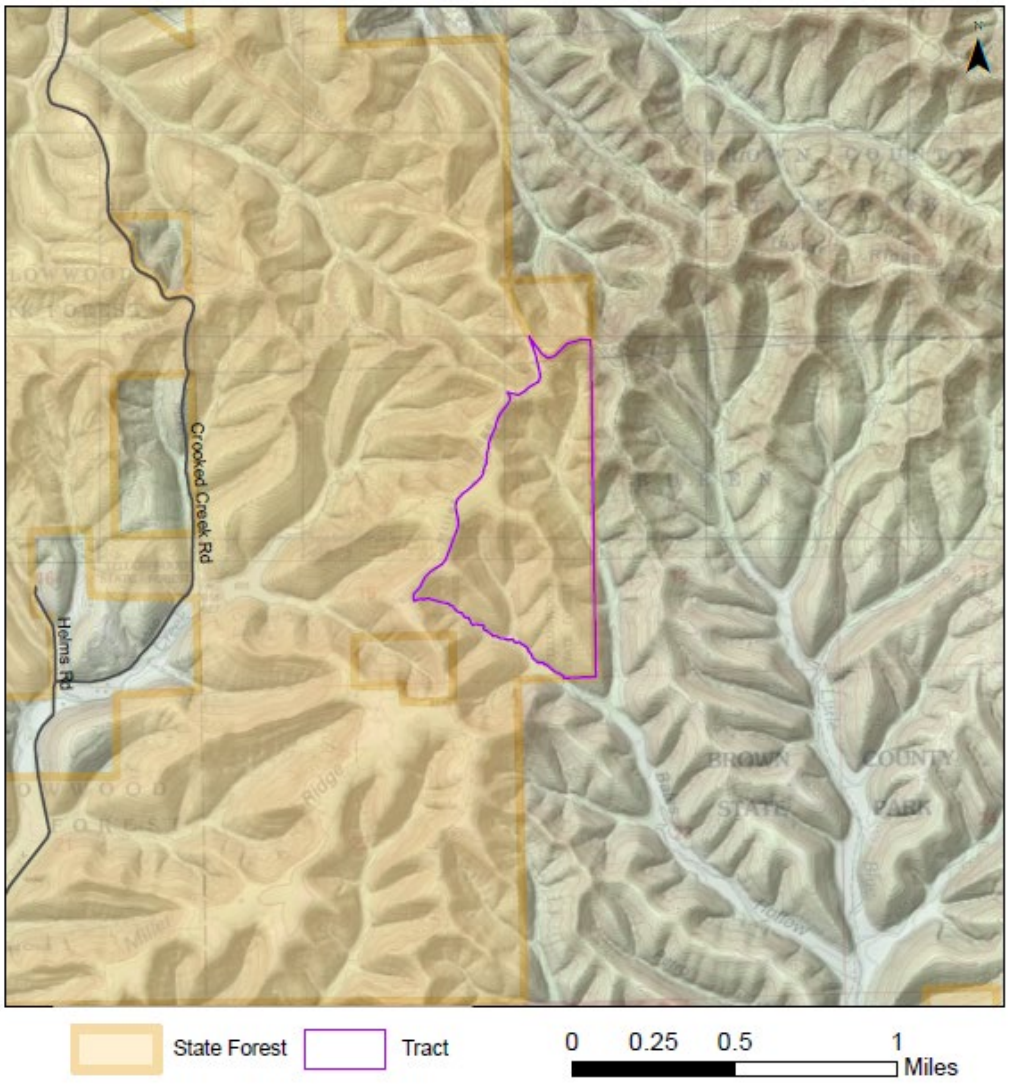
Proposed Activities Listing

Proposed Management Activity	*Proposed Date*
Salvage Harvest	2025-2026
Closeout Work	2026
Post-Harvest TSI and invasive work	2026-2027
Prescribed fire	2026+
3-year regeneration opening review	Three years after harvest
Monitory until next forest inventory	Within 20 years

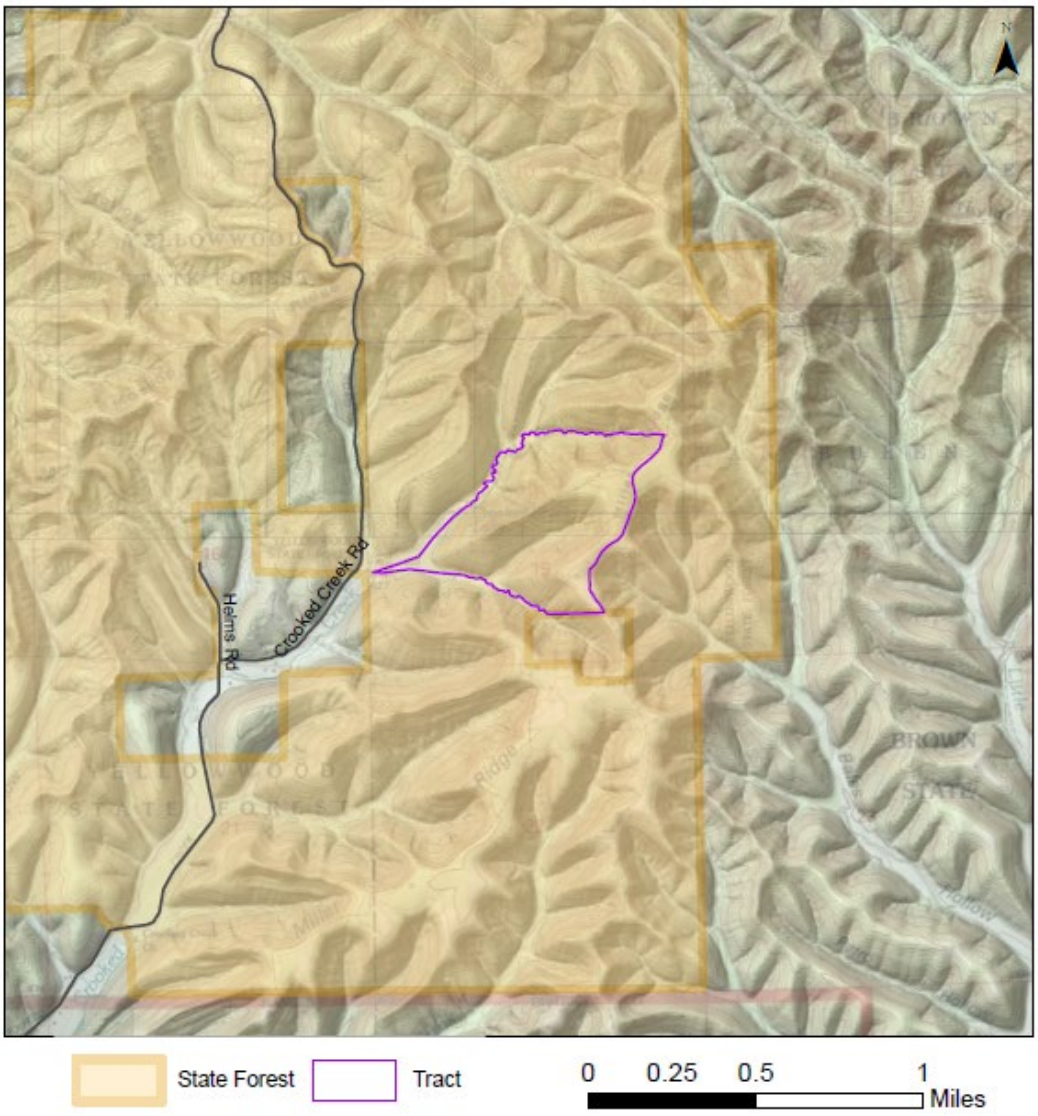
Yellowwood State Forest
Compartment 3 Tracts 16, 18, & 20
5/16/2025 Tornado Salvage Area



Yellowwood State Forest
Location Map
Compartment 3 Tract 16



Yellowwood State Forest
Location Map
Compartment 3 Tract 18



Yellowwood State Forest
Location Map
Compartment 3 Tract 20