

CAN CUTTING TREES PRESERVE FORESTS?

A look at how state forests are logged



By Nick Werner, OI staff
Photography by Frank Oliver, OI Staff

An oak tree stood dangerously close to a ridge-top skid trail at Morgan-Monroe State Forest in southern Indiana.

The trail was part of a logging operation by Phil Etienne's Timber Harvest in November 2013. DNR foresters had not marked the tree to be cut. They hoped to let it continue growing. Etienne's crew had treated the tree delicately, piling branches against the trunk to pad it against passing logs that could wound it while they were being moved to the staging yard.

The effort caught the eye of David Vadas, DNR forest resource supervisor for Morgan-Monroe and neighboring Yellowwood State Forest, as he reviewed Etienne's operation.

"This guy thinks about preventing damage while he's working," Vadas said.

"Save the Trees" is often the slogan of those who object to state timber harvests like this one. But this oak tree shows the same mantra could apply to how DNR manages state forests with the future in mind and how professional loggers like Etienne operate.

There are almost 60 million live trees on Indiana's 14 state forests.

In 2013, only 3 percent of Indiana's roughly 156,000 state forest acres had any logging activity. If you include all DNR-managed ground—state forests, state fish & wildlife areas, state nature preserves, state parks and more—managed timber harvesting happened on 1.2 percent of state-owned forestland.

In state forests alone, more than 2,700 acres are part of state-designated nature preserves, offering them the greatest level of protection from development and human intervention. Tree harvesting is prohibited in nature preserves. Morgan-Monroe has three nature preserves totaling about 500 acres.

When logging happens on state forests, it is done in a way that has been independently audited and certified as meeting rigorous sustainability standards of the Sustainable Forest Initiative (SFI) and the Forest Stewardship Council. Such trees enter the marketplace with value added—as originating in a "Certified as Sustainable" forest.

Nonetheless, DNR Forestry and the Indiana forest products industry face criticism because of an uptick in timber harvests on state forest ground.

The debate is part of a century-old division over natural resources. Some people want most natural areas, if

Framed in a hollow log, David Vadas, DNR forest resource supervisor for Morgan-Monroe and Yellowwood state forests, works in Morgan-Monroe. Last year, 3 percent of Indiana's 160,000 state forest acres were logged.

“But trees are natural, renewable resources. It’s sustainable. A managed timber sale is not the end of a woods, by far.”

—David Vadas

not all, left untouched. Others recognize that a developed world requires a balanced approach that weighs the need for timber and other resources with the need for recreation and wildlife habitat. In the second approach, man is not a passive observer of nature, but an active steward. That is Indiana’s approach to state forests.

The philosophies differ but the goal is the same—to make sure forestland stays forestland.

“I think there can be a disconnect with some of the public today,” Vadas said. “But trees are natural, renewable resources. It’s sustainable. A managed timber sale is not the end of a woods, by far.”

REGROWING FORESTS

Indiana’s anti-logging movement may be more a reflection of the regrettable past than the sustainable present, perhaps a modern-day fight against subsistence harvesting from 100 years ago, fueled by some misunderstanding of history and science.

Almost all of the United States east of the Mississippi River was once forested, including Midwestern states such as Indiana. Before European settlement, the land that became the state was more than 80 percent forested, even what is now central Indiana’s corn belt, which is known for its unbroken views of the horizon.

As the state’s population grew, forests were cleared at a quick pace for fields and pastures.

The nation’s desire for timber contributed to deforestation.

By 1900, Indiana led all states in hardwood production.

The honor came with a heavy price. By 1901, forests in Indiana were at their low point. The state’s original 20-million-acre forest had dwindled to less than 2 million acres. That same year, the state responded by establishing the Indiana Division of Forestry to help regrow and better manage forests.

Reforestation was helped by the Great Depression. Many farms failed, especially in hilly southern Indiana where the land was often marginally productive in terms of agriculture. Broke farmers fled like sandhill cranes leaving in the fall. Some of the abandoned land was barren and worn out. It became national forest, state forests, state parks and other government land.

Indiana’s forestland has bounced back to 4.7 million acres, representing about 20 percent of the state and covering an area larger than Connecticut and Rhode Island combined. About 85 percent of it is privately owned.

Like the Baby Boomers in humans, the massive generation of trees that fueled the expansion of Indiana forests has matured en masse and is getting older. But

Vadas says the popularity of coastal redwoods and sequoias in California—ancient species that in some cases have come to symbolize the modern environmental movement—has resulted in misunderstanding about the life expectancy of Indiana hardwood trees.

Forest soils in southern Indiana tend to be shallow and rocky, incapable of producing such skyscrapers.

“Some people think every tree out here is going to grow to be 1,000 years old and that our big trees are ancient giants,” Vadas said. “But our tree species and soils won’t support that. Generally, hardwood trees have a life expectancy of about 100 years, but some do live longer on our better sites, with white oak being among the most long-lived.”

From a forestry management perspective, now is the time to selectively harvest these trees, similar to the way fall is the time to harvest corn.

“We had to do something in an accelerated manner to prevent looming loss,” Vadas said.

The acceleration in logging, although done sustainably and according to sound science, has upset some people. They point out that logging has increased on state forests by 900 percent in terms of board feet in the past decade.

DNR officials agree that logging has increased.

But they also point out that using those statistics involves using an unfair baseline for comparison. In the early 2000s, logging on state forests was abnormally low. Self-imposed restrictions were followed as the DNR evaluated Indiana bat habitat and new federal regulations regarding that species.

Even with today’s increase in logging, the growth of trees in state forests exceeds harvest by at least a 2-to-1 margin, according to DNR forestry’s 2013 Continuous Forest Inventory report.

ZERO WASTE

Etienne is a logger straight from central casting. He tells colorful stories with a southern drawl sometimes difficult for folks from north of Bedford to interpret. He has hands like a heavyweight boxer and wears camouflaged work shirts with his business’ name embroidered on them. He takes pride in cutting trees and producing wood for a living.

He and his wife Joann have operated their logging and forest products company for 40 years in Saint Croix, near the Ohio River.

Wade Etienne of Phil Etienne’s Timber Harvest trims a downed tree in Morgan-Monroe State Forest. Logging on state forests is independently audited and certified.



“Most people don’t realize that almost all this area we are driving through has had a harvest. Sometimes two or three.”

—David Vadas

The company was named Logger of the Year in 2005 by the Indiana Hardwood Lumberman’s Association. A year later, the Etiennes were named Perry County Soil and Water Conservation District’s “Conservationist of the Year,” proof that logging and conservation are not mutually exclusive goals.

Phil Etienne’s Timber Harvest employs 43 people—six professional loggers, seven truckers and 30 mill workers.

“We’ve got guys that have been with us for more than 20 years,” Joann said. “They might as well be family.”

Some are. Included on the payroll are Phil and Joann’s sons, Wade and Robin, and their son’s wives, Ann and Shannon, respectively.

The forest products industry is the sixth largest industry in Indiana. It employs about 38,000 people, correlating to about \$1.2 billion in annual wages. Indiana is the third-leading producer of hardwoods, and Indiana hardwoods are some of the finest in the world. They end up in products such as veneers, furniture, flooring, cabinets, caskets, and high-end plywoods.

According to research, the industry has public support. A 2009 survey by Purdue University found that 85 percent of Hoosiers said they approve of harvesting Indiana trees for woodland management if overseen by professional foresters.

“The silent majority is there,” Vadas said.

Etienne’s sawmill specializes in high-grade boards for flooring, cabinets, trim, furniture and doors. It produces 8–10 million board feet per year and has ventured into other markets, too.

“We are zero-waste,” Joann said.

Sawdust is sold for horse bedding and as fuel for industrial boilers. Bark and wood chips are turned into high-quality mulch—70,000 yards per spring. Low-grade wood is sold for pallets.

A no-waste approach helps keep the business afloat and is good for the environment. But it’s also part of Phil and Joann’s life philosophies, passed down to them by their parents. Phil grew up on a hog farm. Joann grew up on a dairy farm.

“You didn’t waste much on those farms,” Phil said.

Phil’s father was the first no-till farmer in Perry County, an effort to take care of his land and make sure no soil went to waste. He was named a Conservation Farmer of the Year by Indiana Prairie Farmer magazine in the 1970s. A year later, Joann’s family was honored with the same award.

On a cloudy day in March, rain and snow fell on the Etienne mill. The spring thaw had softened the ground too much for logging. The company was focusing on milling and fixing broken equipment.

The mill is a large pole barn enclosed on three sides and open to the south. It has a circular saw to make the first rough cuts, and two band saws that whittle each log into board widths and then trim the edges. The saws are operated by sawyers from enclosed platforms with enough levers and buttons that they look like Top Gun cockpits.

“It’s kind of like driving a race car,” Joann said about the sawyers. “If you have to think, you’ve already messed up. Everything is just reacting, based on years of experience.”

While the day’s workload came from private ground in Harrison County, Phil said his business would struggle without a state forest resource.

“There’s a steady, sustainable supply, and I know it’s going to be there in the future,” he said.

Indiana state forests are sustainably managed in a way that will continue to produce timber for Robin and Wade when they eventually assume full responsibility of the company.

Logging aside, the forest also will be there for turkeys, snakes and the hundreds of other animal species that use Indiana woods. And it will be there for hikers, campers, mushroom hunters and others who use the forest as well.

SELECTIVE CUTTING

Vadas drove his DNR-issued SUV down the paved Forest Road at Morgan-Monroe. Forest Road serves as the backbone of the forest’s road system, off of which gravel service roads branch onto ridges like ribs.

Vadas was caravanning behind foresters Phil Jones and Josh Kush, who were on their way to help prepare a tract for a timber sale.

The three are part of the DNR forestry division’s well-educated and experienced workforce. John Seifert, the State Forester and director of the DNR Division of Forestry, is a degreed forester and has been a practicing professional forester for more than 30 years. The DNR also employs 22 other degreed foresters who have 400-plus combined years of forestry management experience.

The road the men drove on passed through deep, seemingly untouched woods.

Seemingly.

About 75 percent of Morgan-Monroe State Forest has been actively managed. The remaining 25 percent is too steep or inaccessible for much harvest activity to occur.

“Most people don’t realize that almost all this area we are driving through has had a harvest,” Vadas said. “Sometimes two or three.”

To most forest visitors, tree cover at Morgan-Monroe and in the rest of the state forest system



(Above) Shannon Etienne tallies the footage of a bundle of Indiana wood at Phil Etienne’s Timber Harvest in Saint Croix. The family-run business is a frequent bidder for harvests on DNR land. (Below) Processed lumber is graded at Phil Etienne’s Timber Harvest. The DNR forestry division gives 15 percent of earnings from logging to the counties in which harvests occur.



Indiana's approach to state forests is based on science, including research from the ongoing Hardwood Ecosystem Experiment at Morgan-Monroe.

appears relatively unbroken by logging because the state practices selective cutting on 97 percent of the treated acreage.

Selective cutting means that trees in a given tract are inspected before marking, judging several factors: fire and insect damage, tree quality, low vigor, financial maturity and more. Most state forest harvests are improvement cuttings that remove lower-grade material and enhance the growth of remaining sound trees.

Selective cutting also opens pockets of space that allow more sunlight to reach the forest floor, which is essential to tree regeneration. Retiring an older tree allows another tree to move up in forest pecking order, ensuring continuity in the life of an evolving woodland.

"Everything out here is waiting for an opportunity to grow," Jones said. "Trees compete with each other. People don't realize it. The strong survive and the weak don't. We are working with natural processes and just helping things out a little bit."

The result of a harvest is a less-dense forest still containing larger trees, one that somewhat resembles an older woodland with signs of new growth.

Indiana state forests do not practice traditional clear-cut methods as depicted by large-scale harvests in the western states. Clear cuts are used infrequently on state forests and are much smaller, generally 10 to 25 acres in size. These managed cuts target areas where conditions warrant complete regeneration to replace non-native pine stands and storm-damaged trees, and where an area is dominated by declining or less-desired trees.

Regeneration of areas is more common, using what the state calls forest regeneration openings, which generally average 3 acres in size.

In both cases, most trees are removed from the regeneration area of the tract. But standing dead trees, known as snags and certain other trees are intentionally left to provide animal habitat.

While some people might find the result unattractive, even regeneration cuts provide plenty of benefits. They result in a brushy, dense landscape known as early-successional habitat. Many species need such thick cover to survive. These species include birds such as ruffed grouse, woodcock, whippoorwill and yellow-breasted chat, and mammals such as deer and rabbits. Some of these birds are listed in Indiana as species of special concern due to loss of early-successional habitat.

Berry-producing shrubs also flourish in such openings, providing food for animals.

Indiana's approach to state forests is based on science, including research from the ongoing Hardwood Ecosystem Experiment at Morgan-Monroe.

The HEE is a long-term, large-scale experimental study of forest management and its effect on plants and animals. Project partners include Purdue, Indiana, Ball State, Indiana State and Drake universities, and The Nature Conservancy.

After Vadas and the other foresters reached the tract, they got to work with paint cans and chainsaws. They marked trees to be sold as part of an improvement cut, removed invasive honeysuckle and girdled other trees to create snags for wildlife habitat. Girdling is cutting a strip of bark around the entire circumference of a tree to kill it.

The healthiest and most valuable trees on this tract were left unmarked. The foresters wanted to let them grow.

The trees may be part of the next cycle in 20 to 40 years.

BACKCOUNTRY HARVEST FITS PLAN

At a November timber sale outside the Yellowwood State Forest office, a dozen loggers and logging company reps sat on folding chairs. Before them, DNR foresters unsealed envelopes and read the contents aloud. The envelopes held bids on five areas at Yellowwood and Morgan-Monroe.

Being the highest bidder authorized the winner to remove marked trees under provisions outlined by DNR foresters.

Proceeds of state timber sales support DNR Forestry. But the forestry division also gives 15 percent to the counties in which harvests occur. Each county receiving funds shares half with rural and volunteer fire departments that maintain a cooperative agreement with DNR Fire Control Headquarters.

The largest sale on this day involved 320 acres with about 2,700 trees and almost 900,000 board feet of lumber. The timber was rated good to excellent.

It sold for \$293,000.

Behind the row of folding chairs, Myke Luurtsema stood in a raincoat.

Luurtsema is coordinator of Hoosier Forest Watch, part of the Indiana Forest Alliance, which is a group critical of logging on state forest ground.

In the past, some people have demonstrated at the sales by singing loudly, banging pots and pans, and dressing in tree costumes.

Luurtsema, however, was using pen and paper to record who bought timber and how much they paid. "It's good to have an independent review," Luurtsema said.

One of IFA's and HFW's biggest interests is opposing logging in the 2,700-acre Morgan-Monroe Backcountry Area. There are also Backcountry areas at



(Above) Joann Etienne stacks logs to be trucked out of Morgan-Monroe State Forest. Well-managed DNR forests will recover quickly from logging. (Below) Wade Etienne of Phil Etienne's Timber Harvest prepares a tree for removal in Morgan-Monroe. Animals and birds such as ruffed grouse, woodcock, whippoorwill and yellow-breasted chat, and mammals like deer and rabbits are attracted to regenerated areas.



“Taking care of the land should be deep in a logger’s veins. Take care of the land or get off of it.”

—Phil Etienne

Jackson-Washington and Clark state forests. Both have had numerous timber sales since being designated as Backcountry.

Morgan-Monroe’s Backcountry was established in 1981 to provide recreationalists with an off-the-beaten-path camping experience. Campers are allowed to backpack in and pitch tents, unlike at the rest of state-owned properties, where camping is restricted to campgrounds.

DNR sold timber on this Backcountry Area for the first time in 2009 and then again in 2013. Harvesting on the second sale took place in winter 2013–2014.

When the Morgan-Monroe Backcountry was established, the DNR distributed news releases and published an Outdoor Indiana article saying the area would continue to be managed for timber, and that single-tree selection of mature trees on slopes of less than 45 degrees would be permitted.

At the time, the area’s timber was relatively immature. Most areas of the state-owned forest had already been harvested in the 1960s and 1970s. As the DNR waited for the timber to reach logging stage, Luurtsema and an entire generation of Hoosiers grew up without experiencing logging in Morgan-Monroe’s Backcountry. Many expected the area to remain untouched.

The first timber sale on the Morgan-Monroe Backcountry became a focal point for those objecting to the logging.

None of this day’s tracts were in the Morgan-Monroe Backcountry, although Luurtsema brought it up in conversation.

“Things are out of balance,” he said. “State forests should be managed primarily for deep forest habitat. There are relatively few contiguous tracts of forest left.”

In a later interview, Vadas disagreed. He cited the mission of the DNR forestry division, which says in part: “These lands will provide forest products ...” Even the Backcountry areas, while managed differently, were never excluded from that part of the mission.

Providing an assortment of forest products requires harvesting of trees, preferably in a sustainable manner as done on state forests.

Concerning contiguous forest tracts and deep forest habitat, Vadas said that within a short drive of Morgan-Monroe and Yellowwood state forests—the properties on which the IFA and HFW generally focus—are Deam Wilderness in Hoosier National Forest, a 13,000-acre undeveloped area, and 16,000-acre Brown County State Park. Both are older forests that are off limits to logging, including 3,349-acre Ten O’Clock Line Nature Preserve in the state park.

Logging on all of Hoosier National Forest is sparse,

especially in terms of the property’s size. Since 1990, the 200,000-acre forest has averaged about 1 million board feet per year. Etienne’s sawmill alone processes 10 times as many board feet annually.

“Looking across the landscape there is good and extensive acreage of protected public lands in or moving to older-forest conditions as well as land protected by area land trusts. There’s no strong ecological need for an additional old-growth forest in Morgan-Monroe and Yellowwood, which will continue to provide sustainable contiguous forests and a deep woods environment,” Vadas said.

ONE DOWN, MANY MORE LEFT STANDING

At the Morgan-Monroe logging site, just downhill from the precarious oak tree, Wade Etienne fired up his chainsaw. He was dressed in an orange safety helmet with facemask and protective chaps.

Before him was an old black oak probably 3 feet in diameter and forked near the top. Wade knew he had to lay the tree down just right. If the V-shaped fork fell on its side, it would split the trunk, ruining much of the timber. He needed to put the fork on its back.

He also needed to drop the tree between two other unmarked trees, the logging version of splitting the uprights with a kicked ball on a football field.

Etienne cut. Sawdust flew. He stopped occasionally to hammer wedges into the slit.

Then, with a thunderous crash, the tree fell perfectly, kicking up leaf litter from the forest floor.

The heartwood, exposed to the world for the first time, was a rich, almost burgundy red.

“Boy that’s a nice log,” Vadas said to Wade. “Look at that cut. No waste. It’s nice to work with professionals.”

Vadas counted the rings.

It was more than 100 years old and probably would not have survived many more years.

Another logger attached a cable to it from a wench on a skidder and pulled it up the slope and away. One tree down. Many more left standing. Countless smaller trees that had been waiting in shade now got their shot to reach for the sky.

Well-managed forests recover quickly. In a few years, it will be difficult to tell that Etienne and his crew had been here. And that’s the way Phil Etienne likes it.

“Taking care of the land should be deep in a logger’s veins,” Etienne said. “Take care of the land or get off of it.”

Interpreted another way: “Save the trees.” ■

Trucks loaded with timber crawl out of Morgan-Monroe State Forest on their way to processing in Saint Croix.

