

2015

**Division of
Forestry**



**Annual
Report**

www.in.gov/dnr/forestry/

Strategic Plan

The DNR Division of Forestry released its revised Strategic Plan for 2015-19. Considerable public input helped shape revisions to the initial plan that was released in 2015.

The Division expanded public input to include open houses, public meetings and opportunities to comment on the plan. The Division addressed all comments received from the public to the extent possible. Those comments covered a wide range of topics, from timber harvesting and wildlife habitat to recreation, ecosystem protection, funding, private lands assistance and organizational efficiency.

The revised plan and a public comment summary (Strategic Plan Public Input Process) are on the DNR website at www.in.gov/dnr/forestry/3605.htm.

A few of the changes in the revised plan are:

- Providing assistance to other DNR Divisions with forest-management and forest-health issues.
- Continuing the commitment to providing a balance in forest-age structure, especially to young-forest conditions.
- Increasing the emphasis on wildlife habitat management of state forests.
- Sustaining the emphasis on strategic land acquisition, including acquiring additional state forest acreage.
- Increasing the emphasis on development and management of recreational facilities and opportunities.
- Designating and managing two new high-conservation value forests, one at Clark State Forest and another at Ferdinand State Forest.
- Providing primitive cross-country/backpack trail hiking opportunities on six to seven state forests.
- Increasing emphasis on and management control of exotic invasive species.
- Starting a system-wide initiative to improve trails.
- Selectively opening state forest caves consistent with the conservation needs of threatened and endangered cave species.
- Improving hunter access to areas in need of better deer population management.

As part of DNR Forestry's planning process, comments were received on proposed state forest recreation fees and private lands management fees. The Division will continue to accept comments and recommendations on the proposed fees through November. Comments can be submitted through the questions/comments link at www.in.gov/dnr/forestry/3605.htm.

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The plan also addresses DNR Forestry’s private forest land-assistance programs and the strategic direction for tree nursery operation and hardwood economic development. For more information on these portions of the plan, see www.in.gov/dnr/forestry/3605.htm.

STATE FOREST PROPERTIES



Harrison-Crawford State Forest headquarters renovation showcasing Indiana hardwoods



Work begins on accessible hike/bike trail at Morgan-Monroe State Forest along the main forest road



Renovation of Museum Shelter House and repairs to popular Skyline Drive in Jackson-Washington State Forest



Improvements to multi-use trail and Halloween fun at Deam Lake State Forest Recreation Area



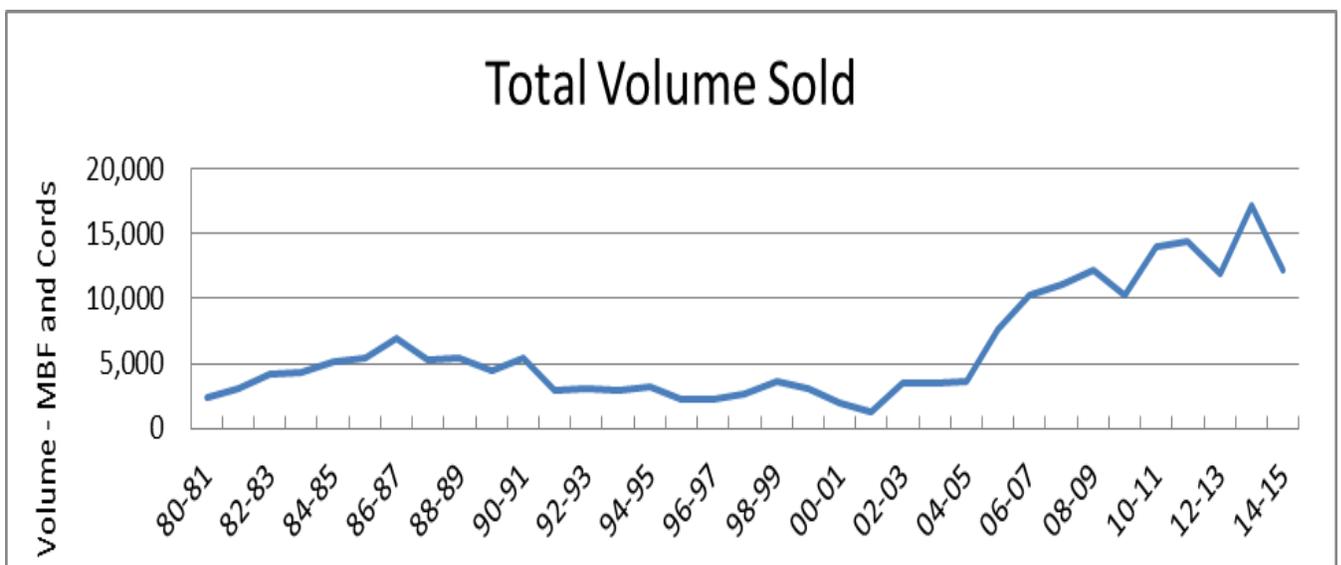
Expansion and upgrade to the Morgan-Monroe office building, which will house the forest's entire staff as well as personnel from Fire Headquarters

Timber Sale Volume and Sale Prices

The Past 12 Years

Fiscal Year	Volume Sold (Bd. Ft.)	Sale Prices
2002-2003	3,458,199	\$1,096,378
2003-2004	3,422,287	\$897,313
2004-2005	3,599,844	\$975,388
2005-2006	7,683,400	\$1,979,460
2006-2007	10,267,384	\$2,669,179
2007-2008	11,302,104	\$2,928,707
2008-2009	12,154,436	\$2,330,511
2009-2010	10,253,981	\$2,368,521
2010-2011	14,065,864	\$2,720,629
2011-2012	14,435,135	\$2,686,672
2012-2013	11,995,721	\$1,887,726
2013-2014	17,148,568	\$4,036,782
2014-2015	12,198,010	\$2,988,047
TOTAL	128,526,734	\$28,468,936

The chart below is a summary of timber volume sold from state forest lands by fiscal year from 1980 through 2015.



STATE FOREST RESOURCE MANAGEMENT

- The 158,300-acre State Forest system has been certified by the Sustainable Forestry Initiative® and the Forest Stewardship Council® (FSC®-C012858) “green certification” programs since 2007. Independent third-party audits are conducted annually to assess compliance with the rigorous certification standards. Audits in 2015 were conducted by Scientific Certification Systems and NSF International Strategic Registrations (NSF-ISR) and successfully completed with high marks and two corrective actions resolved. Forest certification independently confirms the State Forest system as “well managed forests” and allows wood products from State Forests to participate in the national and global market of “green certified” wood products.
- In 2015, many miles and thousands of acres of forest restoration, trail, boundary and forest improvement work was completed or contracted. The work positions these forests for continued health and productivity, providing jobs and other forest benefits for Hoosiers today and tomorrow. Primary work included control of invasive plant species (150 acres), trail maintenance and improvement (513 miles), forest and timber stand improvements (2,500-plus acres), and 102 miles of boundary work.
- Sustainable “green certified” wood products from State Forests in FY 2014-15 totaled 10.9 million board feet and 5,358 cords with gross revenues of \$2,988,047. These managed harvests were spread over 4,953 acres of the 158,300-acre State Forest system. Single-tree select cuts were the predominant harvest strategy. DNR Forestry sends 15 percent of timber sale proceeds to county governments to help support volunteer fire departments—this amounted to \$441,977 in FY 2014-15. The current annual timber harvest prescription for the State Forest system is set at 14 million board feet, which is a fraction of its total and continually increasing 1.153 billion board feet volume.



- Below is the summary of timber management activities across the entire State Forest system for 2015.

	FY 13-14	FY 14-15	% Change
Timber value sold	\$4,036,782	\$2,988,047	-26
Price per mbf	\$260.53	\$275.18	+6
Timber volume sold	15,495 mbf	10,859 mbf	-30
Harvested acres	8,340	4,953	-41
Acres of openings	626	413	-34
Average volume per tree – board foot	218	209	-4
Volume removed per acre – board foot	1,858	2,192	+18
Timber sale revenue to counties	\$333,540	\$441,977	+33

Average timber prices on state forests ranged from a low of \$17/mbf to a high of \$379/mbf. Overall average price was up. Yellow poplar was the species with the highest volume sold (27%). Black oak had a smaller share of volume sold (11%) compared to last year's figures. Other species that accounted for a significant volume sold were white oak (9%), chestnut oak (9%), white ash (10%), Northern red oak (3%), sugar maple (5%), white pine (3%), Virginia pine (4%), red maple (3%), American beech (3%) and scarlet oak (4%). Oak, as a group, accounted for 37% of the volume sold, less than last year's figure. Pine was about 8% of the volume sold, down from last year's figure. A total of 42 sales were conducted, with an average volume per sale of 252,000 board feet. One property had no forest openings, with the largest opening averaging 4.8 acres.

- IC 14-23-4-5& 6 requires the Division to return to counties from where timber was sold 15 percent of the net timber sales receipt as well as a maximum of \$1,000 unless the county legislative body allows more to fire departments that have an agreement with the Division.

Timber Sale Revenue, Costs and Revenue to Counties - The Past Twelve Years

<i>Fiscal Year</i>	<i>Sale Revenue</i>	<i>Sale Costs</i>	<i>Revenue to Counties</i>
2003-2004	\$998,141	\$83,385	\$122,089
2004-2005	\$969,321	\$73,584	\$135,271
2005-2006	\$927,604	\$66,194	\$164,327
2006-2007	\$2,513,696	\$158,385	\$302,897
2007-2008	\$2,636,402	\$187,511	\$366,871
2008-2009	\$2,689,378	\$219,640	\$349,728
2009-2010	\$1,896,177	\$304,793	\$289,342
2010-2011	\$2,182,574	\$128,409	\$283,412
2011-2012	\$2,664,905	\$251,452	\$381,441
2012-2013	\$2,726,816	\$192,792	\$314,149
2013-2014	\$2,515,141	\$269,206	\$333,540
2014-2015	\$2,755,032	\$253,696	\$441,977
TOTAL	\$25,475,187	\$2,189,047	\$3,485,043

- State Forest land acquisition added a 54-acre parcel at Jackson-Washington State Forest. Although acquisition funds are limited, DNR Forestry will continue to entertain strategic conservation land purchases in 2016.
- Emerald ash borer (EAB) was first confirmed in Indiana in 2004. By 2009 it had spread to the State Forest system at Salamonie River State Forest, where it killed nearly all ash trees greater than 2 inches in diameter. EAB has continued to spread across Indiana and is now found on nearly all DNR properties with ash trees, including all State Forests. The transport of contaminated firewood is believed one of the primary vectors in the EAB spread to DNR properties. There are approximately 1.6 million ash trees in State Forests that contain an estimated 34 million board feet. Some of this material will be used through the timber management program, but much will be lost. General information on EAB can be found at www.in.gov/dnr/entomolo/3443.htm.

Indiana Bat & Northern Long-eared Bat Habitat Conservation Plan (HCP) Update

- After the final listing for the Northern long-eared bat (NLEB) as federally threatened in April 2015, updates were made to the State Forest Habitat Conservation Plan. In addition to the final rule on the species' listing, "interim" conservation measures and exclusions on take were put into place under a special 4(d) rule. A final 4(d) ruling was released by the U.S. Fish and Wildlife Service in January 2016,

and DNR Forestry is currently incorporating the new ruling into the final draft of the HCP, which is expected to be delivered to USFWS in summer 2016.

Wildlife & Research

- In 2015, DNR Forestry provided direct support to 14 research projects investigating the ecological effects of forest management on State Forests. Most of the support went to researchers involved with the Hardwood Ecosystem Experiment (www.heeforeststudy.org/), a long-term project based at Morgan-Monroe and Yellowwood state forests.
- DNR Forestry provided support to 10 graduate/postgraduate researchers in 2015 working on questions related to forest management and ecological impacts. Since 2006, DNR Forestry has provided support to 35 graduate and postgraduate researchers.
- DNR Forestry-supported researchers published nine articles in peer-reviewed scientific journals and completed two master's theses and one doctoral dissertation in 2015.

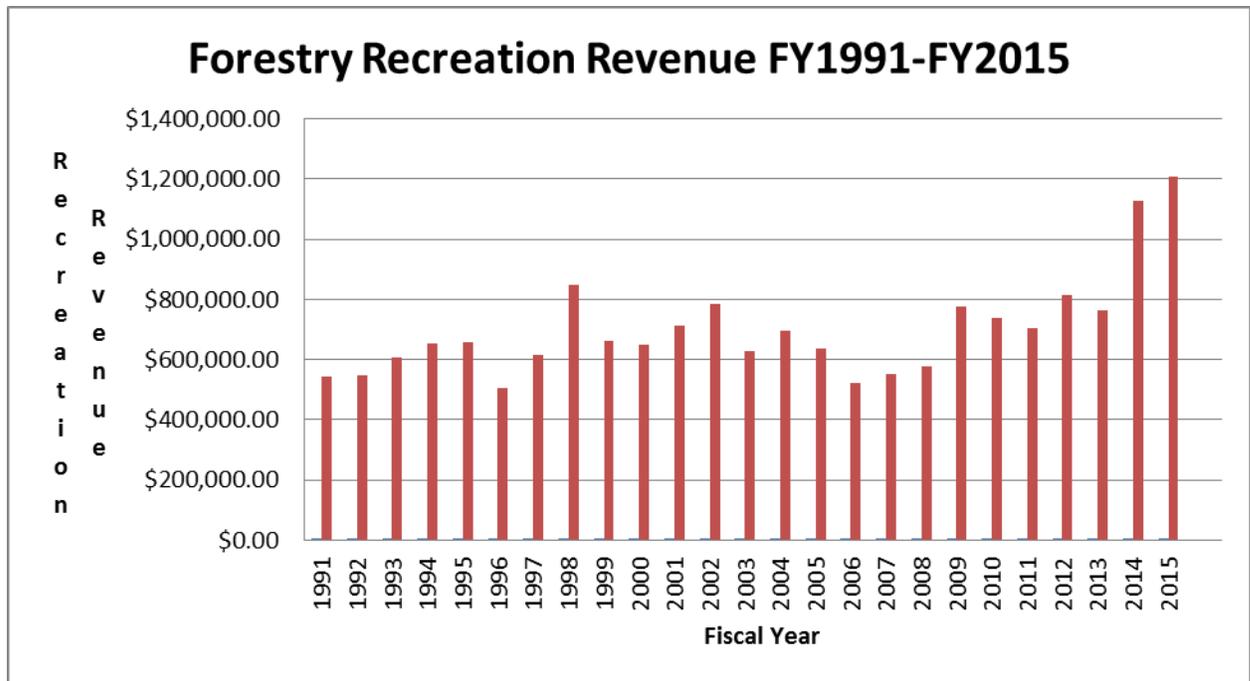
Recent Select Hardwood Ecological Experiment (HEE) Project Summaries

- Indiana bats (federally endangered) and Northern long-eared bats (federally threatened) continue to use recently harvested sites and forest openings for roosting during the summer maternity period. Currently, two Indiana bat maternity colonies have been discovered on State Forest land due to HEE research, and most roost locations are within recent harvests or in open-canopy environments.
- Acoustic bat echolocation surveys determined that all State Forest bat species used experimental harvest areas at least as often as they used unharvested controls, and two species—red bat and hoary bat—used harvested areas more often than they used unharvested controls. Similar to earlier HEE studies, no evidence was found showing that any bat species avoided harvested sites.
- As in previous years, bird species associated with mature forest habitats dominated HEE breeding bird surveys, including: worm-eating warbler, scarlet tanager, ovenbird, red-eyed vireo, Acadian flycatcher and wood thrush.
- Field work began in 2015 for a study investigating use of clearcuts by bird species that breed within mature forests. Several species associated with mature forests were captured using early successional areas during late summer, including worm-eating warbler, scarlet tanager and ovenbird.
- Deer herbivory studies at HEE have found that deer browsing reduces density of seedlings in smaller harvested openings, which increases the richness of herb-layer species. This increase in species is most pronounced among uncommon forbs. No difference in seedling density was found among exclosures located in 10-acre clearcuts.

- A total of 77 male cerulean warblers (a state-endangered species in Indiana) were detected during summer surveys. Detections occurred in all study units except for one control unit. As in 2014, nesting success was estimated to be 33 percent.

State Forest Recreation

- State Forest recreation facilities include three gated properties, 19 family campgrounds (650 electric and non-electric campsites), six equestrian campgrounds (200 electric and non-electric camp sites), 37 camping cabins at three locations, two family cabins, 300 miles of hiking trails, 41 miles of bike trails, 270 miles of horse trails, more than 140 lakes, 150,000 acres of hunting and foraging opportunity, three backcountry-style trails with walk-in trail-side camping, one shooting range, two archery ranges, two nature centers, three swimming beaches, 30 picnic shelters, and more.
- Campground improvement projects were initiated at Clark State Forest and Greene-Sullivan State Forest to add a comfort station and flushing toilets, fulfilling one of the most frequent recommendations from State Forest campers. These facilities will also continue to offer primitive camping. Camping at Deam Lake and Starve Hollow State Forest recreation areas and Greene-Sullivan State Forest can be reserved online at indianastateparks.reserveamerica.com. We hope to expand reservable camping at other State Forests in coming years.
- The sediment removal project at Starve Hollow Lake continues around the lakefront campsites and into the upper reaches of the lake. The project involves removing sediment that has accumulated since the lake was built in 1938. The project continues to improve boating and fishing access. Work is done mostly during winter months to minimize impact on summer recreation users and is slated for completion in spring 2018.
- Trail maintenance and improvement projects were undertaken at several properties with approximately 500 miles of trails receiving attention. The popular Knobstone Trail was fully transitioned to State Forest management in late 2015. A new trail map is due out in spring 2016.
- State Forest camping cabins and the fully furnished retreat cabins at Morgan-Monroe and Covered Bridge continue to be popular with guests. See more at www.in.gov/dnr/forestry/7694.htm
- Recreation revenue was \$1.4 million in 2015, an 18 percent increase over the previous year. The increase is attributed in part to changes in fees, enhanced facilities and an improving economy.



State Forest Community Involvement

- State Forests hosted 24 special events in 2015 with an estimated 5,240 participants. Events included “polar bear” plunges at Ferdinand State Forest and Deam Lake State Recreation Area. The Deam Lake event is one of the most successful in the state, raising thousands of dollars for Special Olympics. Other events included horse and mountain bike trail rides, orienteering, running events and more.
- Annual open-house and public-comment events were held across the system to invite the public to view operations, meet property personnel and comment on property projects and concerns. Some events featured tours of facilities, short hikes and talks on forestry and other natural-resource topics of interest.
- Volunteer opportunities on State Forests continue to expand, ranging from one-time projects, campground hosts, and long-term efforts and contributions by individuals and groups. A total of 29 volunteer projects were held at State Forest properties in 2015. The adopt-a-trail program at Morgan-Monroe/Yellowwood state forests is perhaps the largest and longest-running program. Additional campground host opportunities are expected in 2016, <http://www.in.gov/dnr/forestry/files/fo-campgroundhost.pdf>.

State Forest Facilities

- Repair, renovation and updating of facilities are ongoing parts of State Forest operations, with many facilities receiving facelifts and some properties getting new construction in 2015. Significant projects included full restoration of the CCC-era “museum shelter house” at Jackson-Washington State Forest

and renovation of the reception area at Harrison-Crawford State Forest, both of which highlight the beauty of Indiana hardwoods. The wood-heat facility was rebuilt at Ferdinand State Forest, and shop facilities were completed at Clark State Forest and Morgan-Monroe State Forest. The Clark State Forest shop will include a wood shop using Indiana-grown hardwoods to benefit State Forest and other DNR facilities. Construction continued toward the complete renovation and expansion of the administrative office and visitors center at Morgan-Monroe State Forest. This project will merge offices from three locations to streamline operations, reduce costs and provide improved visitor services. This project should be completed in late 2016 to mid-2017.

- State Forest facility improvements and construction projects rely heavily on in-house labor, skills and wood materials. This has kept down costs and allowed significant accomplishments to occur over the last several years. Partnerships with the Indiana Department of Correction also have been instrumental in these accomplishments as has valued assistance from many volunteers.

FOREST RESOURCE INFORMATION

DNR Forestry ...

- Provided 1,625 technical assists upon request to various customers on topics of marketing, utilization, efficiency, forest industry certification, best management practices, and forest resource and industry data.
- Managed a Forest Stewardship Council Chain of Custody group consisting of 75 small-to-medium forest-industry companies and conducted 39 internal audits and coordinated nine audits by its certifying body. Estimated economic impact is more than \$30 million.
- Completed three documents highlighting log pricing, logging costs, residue costs, custom costs, and lumber pricing. (2015 Indiana Forest Products Price Report and Trend Analysis (Fall 2015) http://www.in.gov/dnr/forestry/files/fo-fall_Indiana_Forest_Products_Price_report.pdf, 2015 Indiana Forest Products Price Report and Trend Analysis (Spring 2015) http://www.in.gov/dnr/forestry/files/fo-Spring_2015_Price_Report.pdf)
- Provided various training opportunities (log, lumber, tree-grade workshops, chainsaw training, best management practices, SFI, etc.) to 131 attendees for 734 contact hours. Attendees included professional natural resources personnel and forest industry professionals.
- Coordinated two Field Day/Industry Education/Industry tours and presentations that were attended by a total of more than 95 people.
- Monitored 86 timber harvests for Best Management Practices (BMPs) for application/effectiveness. BMP Monitoring reports were produced for the monitoring completed on the state properties, which can be found at http://www.in.gov/dnr/forestry/files/fo-1996_2014_State_Forest_BMP_Report.pdf , and for the CLF&W program carried out in 2014, which can be found at http://www.in.gov/dnr/forestry/files/fo-1996_2014_Classified_Forest_BMP_Report.pdf .

- ... and its Forest Resources Hardwood Economic Development Specialist continued to maintain the program's principles to support Indiana's primary (logs, lumber and veneer) and secondary (furniture, flooring and cabinets) industries. Ongoing domestic and international programs have been representing Indiana manufacturers at international and domestic trade fairs and trade missions along with arranging/supporting international buyers on site visits. Four global trade fairs were attended in 2015—one in the United Arab Emirates and three in China. From these growing and emerging markets, more than 170 hardwood leads were generated, along with recurrent leads received via email. These leads generated approximately \$950,000 in new business for the hardwood industry and the State of Indiana. Additionally, through our association with the American Hardwood Export Council (AHEC) all funding for the trips was paid with federal dollars.
- Created graphs depicting economic impact to the state from combined primary/secondary forest products industries as well as how Indiana ranks against other states in several economic indicators.
- Provided site visits to five international importers from Turkey, China and Italy, generating additional dollars of new and long-term business for Indiana's log, veneer, and lumber manufacturers.
- Made numerous presentations to civic and agriculture groups on the importance of the sustainability of Indiana's forests and the overall economic impact of the hardwood industry.
- Had state employee field staff collect forest inventory data from 250 FIA plots across the state. Collected annually, the information provides an excellent picture of the forest resource in Indiana. Some highlights from this research show Indiana has 4.9 million acres of forestland (a 3.5% increase since 2009), 2.2 billion live trees (2.5% increase since 2009) or 452 trees/acre on average. Net volume experienced an 8.4% increase and averaged 2.1 thousand cubic feet/acre. The latest annual update can be found at http://www.in.gov/dnr/forestry/files/fo-2014_FIA_Annual_Report.pdf. The latest full five-year analytical report is currently at the press and will be released shortly.



- ... through its Forest Resources Information (FRI) section, concluded its eighth (third year of re-measurements) of the Continuous Forest Inventory (CFI) program this year. CFI, which closely

resembles the U.S. Department of Agriculture Forest Inventory & Analysis Program, provides an up-close view and valuable, timely, and current data regarding the forest resource on State Forest properties. Data were collected from 750 plots. The latest property report can be found at http://www.in.gov/dnr/forestry/files/fo-State_Forest_CFI_Report_2010_2014.pdf. Another inventory program coordinated by FRI concluded its fourth year of plot establishment. Field plots are being installed by crews on woodlands in the Classified Forest& Wildlands program. With these plots just being established and initial data being collected, a full sample is not yet completed but the initial report can be found at http://www.in.gov/dnr/forestry/files/fo-Classified_Forests_CFI_Report_2011_2014.pdf

Hardwoods-Exports

Indiana's agriculture industry exports have more than doubled in the last decade, surpassing the export growth of non-agricultural products. Indiana has a rich heritage of farmland and forestry production. Agriculture—defined to include both farm and forest production— plays an integral part in the state's economy. Indiana forests (4.7 million acres) are known for quality hardwoods and can boast that more than 35,500 workers were attached to logging, sawmill manufacturers and furniture-production establishments scattered throughout the state. Moreover, despite increasing population and development, the quantity of forest land has increased over the years, allowing Indiana to continue its timber harvesting without sacrificing forest land growth.

Eighty-four percent of Indiana's forest land is privately owned and is heavily populated with oaks and hickories (71.7 percent) and ash, cherry, tulip poplar and other hardwood trees (13.6 percent). In 2011, approximately 85 million board feet were harvested from Indiana's forests despite the slump in prices witnessed in the past few years. (Source: IBRC, using WISER Trade and ERS data from the USDA)

International

With nearly 95 percent of the world's consumers and two-thirds of the purchasing power located outside of the United States, expanding into the global marketplace provides Indiana hardwood manufacturers with more opportunities to increase their markets.

Indiana State Department of Agriculture's (ISDA) Hardwood Economic Development program manager has a strong focus on international markets and can help Indiana businesses navigate the exporting process. Some activities staff can assist with include:

- Determining the company's readiness to expand into foreign markets
- Market research
- Regulations
- Trade shows
- Trade missions
- Accommodated site visits for international customers

Note: Additionally, through our association with the American Hardwood Export Council (AHEC) all funding for the trips was paid with federal dollars.



Sylva Wood Trade Show in Shanghai, China 2015

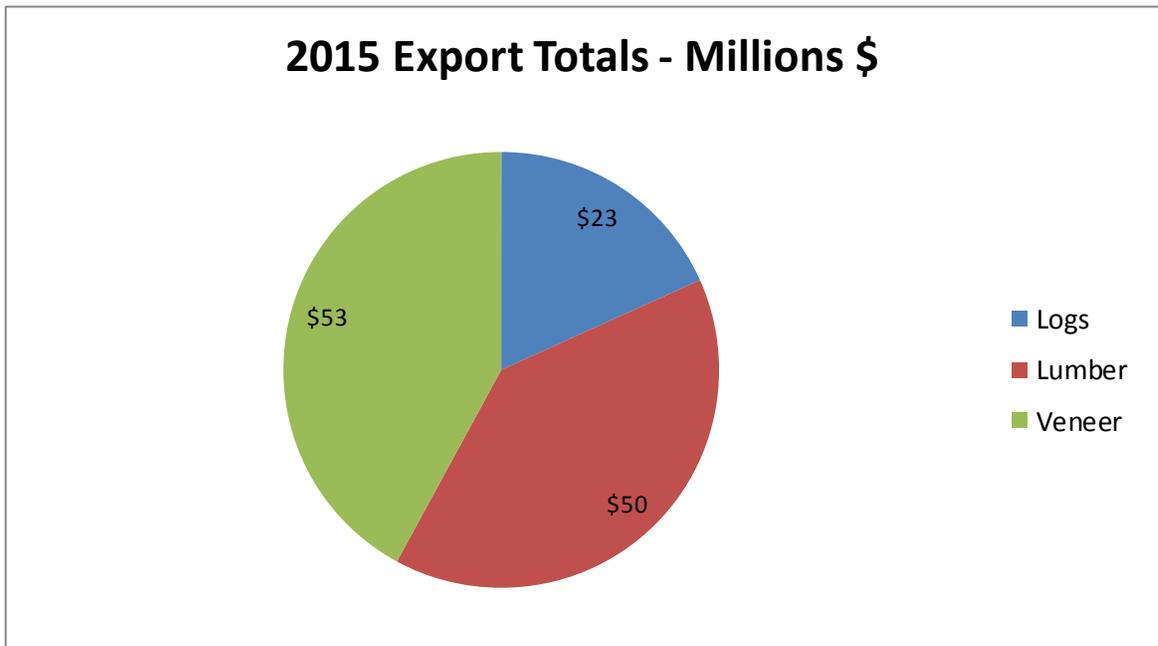


Dubai International Wood Machinery and Wood Furniture Trade Show



Turkish veneer companies on a reverse trade mission hosted by ISDA-DNR

Reverse Trade Mission - A rapidly growing economy that must import most of its hardwood needs resulted in the ISDA and DNR hosting a business delegation from Turkey. Six large importers and flooring manufacturers attended the reverse trade mission. The continued growth of Turkey’s middle class offers great potential for Indiana exporting manufacturers. Site visits to veneer and lumber manufacturers, along with one-on-one meetings with seven Indiana companies offered Indiana exporters opportunity to market and quote their individual products.



Notes: 2015 Actual totals will be available in April 2016. All export numbers are from USDA-FAS & U.S. Census Bureau.

Community & Urban Forestry

Arbor Day Foundation Initiatives

- In 2015, Indiana maintained 65 approved Tree City USA Communities. Of those, nine communities expanded their urban forestry program to earn a Tree City USA Growth Award. Tree Campuses grew to 10 participating universities and colleges in the state. The Alliance for Community Trees (ACTrees) has now become a program of The Arbor Day Foundation. Neighborwoods Month, October, was still promoted in Indiana but not to the same level as in prior years because ACTrees staff was less available to promote programs.
- In terms of statewide metrics the Community & Urban Forestry (CUF) program lost one staff person in late 2014. The program has one acting coordinator/volunteer coordinator and an intermittent grants administrator. Although short-staffed, the program continued to provide direct technical assistance or education programs in 121 cities and towns, serving the approximately 2.3 million Hoosiers that live in the communities receiving technical/ financial assistance and educational programs.
- The CUF program worked harder than ever in 2015 to promote the value of urban forestry through youth education. The program partnered with The Indiana Urban Forest Council, Hoosier ReLeaf and many cities and towns to hold an Arbor Day Poster Contest, host a nationally recognized youth education speaker at eight locations, provide experts to regional Envirothon events at which Urban Forestry was the special topic, and spoke with students in class about careers in forestry and urban forestry. In total CUF reached more than 14,000 students teachers and parents statewide.
- A highlight was planting trees with the First Lady Pence and local Daycare students at the State Government center site at which every previous tree had been lost due to emerald ash borer.

Grants Programs

- In 2015, CUF contracted a total of \$225,000 in subgrants to communities and not-for-profit originations across the state. A total of \$135,000 was contracted in subgrants for inventories and management planning, tree planting, and education programs with 12 communities and other groups in Indiana. Through the Great Lakes Restoration Initiative, \$90,000 was awarded to six communities for tree planting to mitigate the effects of the emerald ash borer. The two grant programs will lead to four inventories/management planning, 13 tree plantings (approximately 1,345 trees), educational programs, and interpretive signage.

Volunteer Training Programs

- In 2015, three Indiana Community Tree Steward Training Programs held in partnership with the Indiana Urban Forest Council trained 78 new Tree Steward volunteers, bringing the total number of volunteers trained since 2005 to 1,611. We also held one advanced pruning day with the City of Valparaiso and one Advanced Winter ID in Richmond, at Hayes Arboretum.
- As of December 2015, Tree Stewards reported more than 1,720 volunteer hours in Indiana communities at a value of \$25,000 of in-kind volunteer services for tree planting and maintenance, educational programs for adults and youth, serving on a community tree board, continuing education time, and a host of other urban-forestry-related work.

Education

- CUF provided tree information talks to more than 15 “green” group contacts statewide in 2015 (not including Arbor Day events). CUF also provided articles to Outdoor Indiana magazine, Hoosier Arborist Newsletter, and sat as an expert for two Indiana DNR Facebook chats.
- CUF sponsored two regional Municipal Tree Works programs for state and local government staff. Attendees gained training in tree care and maintenance, safety, urban woodlot management, and risk assessment. Continuing education units credits for certified arborist were made available to attendees. The 40 participants included city managers, streets commissioners, facilities directors, engineers, foremen, parks superintendents/managers, INDOT staff members, Indiana Army National Guard members, forestry technicians, municipal arborists, and representatives from school corporations and landscape companies.
- CUF staff helped coordinate and lead trainings in Evansville and Brookville as part of the Forest Pest Outreach and Survey Program (FPOSP) in partnership with the DNR Division of Entomology & Plant Pathology and Purdue University. More than 70 people attended.
- CUF staff also sponsored and provided training at the Indiana Arborist Association’s Arborist Certification training workshop held at Fort Harrison State Park in November 2015, before the International Society of Arborists (ISA) Certified Arborist Exam. More than 20 people attended.

Conservation Education

Project Learning Tree is an environmental education curriculum program designed for teachers and other educators, parents, and community leaders working with children and youth from preschool age through grade 12. PLT advances environmental literacy and promotes stewardship through excellence in environmental education, professional development, and curriculum resources that use trees and forests as windows on the world.



- In 2015, more than 300 Indiana educators were trained in the program. The strongest area continues to be the training of pre-service teachers. A total of 10 workshops were conducted at seven universities. Instructors either integrated PLT into their science methods courses or held standalone workshops to prepare 123 teachers-in-training to use the program.
- Five new facilitators were trained to conduct PLT workshops. Volunteer facilitators donate 15-20 hours each for every workshop they conduct, in addition to providing their own workshop materials. Indiana PLT continues to explore new audiences for the program, including afterschool, STEM education and agriculture educators.
- Dawn Hammon, an Indianapolis kindergarten teacher, was selected as a National Outstanding Educator by national Project Learning Tree in 2015. She was one of five selected from nominations made by state PLT programs across the country. She traveled to the annual PLT International Coordinators Conference in Saratoga Springs, New York, where she was also awarded the Barb Pittman Award, which recognizes the importance of children's literature in the field of environmental education. Dawn and her husband Troy, a teacher at Tech High School in Indianapolis, also participated in the International Educators Workshop conducted by the World Forestry Center in Portland, Oregon.
- The second Natural Resources Teacher Institute took place in June at the Forestry Training Center at Morgan-Monroe State Forest. A joint effort of DNR Forestry and Purdue University, the week-long event brought together 13 educators representing formal and non-formal sectors. They learned about Indiana's forest resources, its forest products industry and the research being conducted by the Hardwood Ecosystem Experiment. Each educator was required to develop a lesson plan during the week to take back and carry out with his or her students.



- The Division of Forestry Facebook page reached the 2,000 “Like” milestone by the end of 2015. Status updates are done several times a week to make sure followers have new information about Indiana’s rural and urban forests. Posts on fall colors, recreation opportunities at State Forest properties, and information on tree health were among the most popular posts in 2015.

Grants

In 2015, DNR Forestry continued to carry out a number of federally funded grant projects. The abstracts provided below represent a handful of the important working-forest conservation initiatives made possible through the support and assistance of federal and other partners.

Invasive Species BMP Pilot Project

The two-year project carries out the recommendation of Indiana Invasive Species Council to assess and refine the Invasive Plant Advisory Committee's Invasive Species Best Management Practices and provides funding for demonstration and public outreach to encourage private landowner adoption. The project directly addresses a main strategy of the 2010 Indiana Forest Action Plan. It will be coordinated across 148,000 acres and engage 22 professional foresters in invasive species monitoring, mapping, planning, treatment, inspection, education, documentation and other activities. Public marketing of the final product will include demonstrations and reach an additional 58 professional and 35 public foresters, 99 Soil & Water Conservation Districts and Resource Conservation & Development councils,

approximately 14,000 Classified Forest & Wildlands owners, and 50 member organizations of the Forest Stewardship Coordinating Committee that represent thousands of individuals interested in the management of Indiana's forests.

Large Block Outreach & Enrollment

Classified Forest & Wildlands (CFW) Program expansion continues to be a goal in statewide conservation initiatives, including the 2010 Indiana Forest Action Plan. Legislated requirements, changes in state tax policy, and limited resources to hire additional Cooperative Forest Management (CFM) staff create challenges in targeting outreach and new enrollments to large tracts in priority areas. The project provides funding for outreach and for foresters to enroll targeted forest land according to a prioritized parcel list developed from the Parcel Level Strategies project, a geospatial forest landowner contact information database. The largest privately owned parcels of existing forest land within Forest Action Plan target areas will be contacted and receive information about the CFW program, federal programs, and other conservation options. Detailed records will be kept of landowner responses, conservation intent and program enrollments.

Next Steps in Early Detection, Rapid Response

This project specifically addresses Forest Action Plan, Strategy 3 component, to “develop statewide Early Detection Rapid Response Program (EDRR) for forest invasive plants” and other action steps. It creates a robust bulwark against establishment of new invasive plants in Indiana's Target Forest Areas using a “strike team” to coordinate education and awareness, and to conduct control efforts for EDRR species. The project builds on an established and successful U.S. Forest Service Northeastern Area State & Private Forestry-funded project in southern Illinois. DNR Forestry coordinates the project in concert with Southern Indiana Cooperative Invasives Management (SICM), the oldest and largest Cooperative Weed Management Association in Indiana. DNR Forestry and SICIM have an established track record of working with a broad base of partners to facilitate EDRR. Invasive plants are a significant problem throughout Indiana. A conservative estimate by the Indiana Invasive Species Council (IISC) showed that property owners and other taxpayers spent \$5.85 million in 2012 controlling invasive plants. State agencies spent about \$3 million controlling plant species. Control of invasive plants ranked among the top three forest issues in the 2010 Indiana Statewide Forest Assessment. Left unchecked, invasive plants are a direct threat to forest regeneration and sustainability. The project carries out the full spectrum of EDRR activities, from education and awareness to reporting and control. It significantly enhances local-level capabilities while leveraging the strike team to make strides in EDRR species control. The project leverages partner involvement, including that of the Indiana DNR, IISC, Midwest Invasive Plant Network (MIPN) and others. It expands invasive-plant EDRR efforts from a small group of well-informed partners to a coordinated regional network that acts, responds and interacts at local and regional levels to address one of the greatest threats to Indiana's working forest landscapes.

Sustainable Forestry Television Series and YouTube video series

- This project will explore, in depth, 13 topics on sustainable forest management in half-hour segments, and develop 35 “how-to” instructional videos that build on DNR Forestry capacities to deliver training and information to private landowners in a reliable, on-demand format. The effort follows the success of “Indiana Expeditions: Forests At Work,” an hour-long TV feature first broadcast in April 2012 (and streaming online) and builds on a partnership with Metropolitan Indianapolis Public Broadcasting, Inc. (WFYI). Advances in mobile devices, changing consumer behavior, and efficiencies in audio-visual productions have bumped demand for accessible, relevant and concise video to provide information on woodland stewardship to private landowners who are increasingly connected to digital media but perhaps less connected with managing their forests. Both efforts increase landowner forest connections and get folks outdoors to explore and try new things.

Maximizing the Positive Impact of Logging in Target Forests in Shawnee & Brown County Hills

- This project delivers intensive, highly relevant and up-to-date training on an expanded suite of forestry best management practices directly to Indiana loggers who operate in Indiana’s most strategically important forests, as defined by Indiana’s Forest Action Plan, including Indiana DNR State Forests. The project focuses not only on timber harvest BMPs that protect water quality but also on BMPs that prevent the spread of invasive species, silviculture BMPs, and BMPs related to threatened and endangered species, among others.
- The Shawnee & Brown County Hills target forest is the core of Indiana’s timber-producing region. These forests are the main source of Indiana’s hardwood industry, and improved best management practices there will have impact throughout the Central Hardwoods Region. These best management practices will affect forest ecosystems at the landscape scale and ensure that logging is practiced with increased positive impacts and decreased negative impacts.

Fire Headquarters

This year brought many challenges to DNR Fire Headquarters, but each program produced positive results that were either directly or indirectly related to the response to the 2015 summer/fall fire season.

- With budget challenges and time constraints, Fire Headquarters evolved and adapted to maximize the performance of each program. The 2015 spring consisted of alternating week-long dry and wet weather that brought forth a handful of prescribed-fire opportunities. The fall provided a short and wet burning period. The summer-fall fire season prompted Indiana to help in fire suppression activities in Alaska, California, Florida, Idaho, Minnesota, Missouri, Montana, Oregon and Washington.

- Significant strides were made in other program areas, including federal excess property to rural and volunteer fire departments, training for fire personnel, volunteer fire assistance grant management, and fire prevention throughout the state.

Fire Operations

The year was dominated by the above-average rainfall that lowered the fire risk and reduced the number of prescribed fires performed. Brief two- to three-day dry periods provided enough time to dry the one- hour fuels and allow some wildfire activities as well as prescribed burning.

Fire Suppression Operations:

- 4 fires burning 40 acres
- Numerous technical/tactical assists (estimated at 85-plus)
- No personnel injuries or losses of equipment
- Largest fire of the season was just under 20 acres

Prescribed Fire Management

- Administered 16 prescribed fires, a total 1,665 acres short of the established goal because of significant amounts of moisture during the spring/fall fire season.
- Fire Headquarters mobilized one Type II Initial Attack crew and 28 single resources to Washington.

Federal Excess Property Program

- The Federal Excess Property Program (FEPP) enables DNR Forestry to screen and acquire excess federal property for distribution and service. While this particular program provides rural departments with four-wheel drive vehicles that are typically used as brush rigs, many other items essential to rural fire protection (i.e., generators, tankers, pumps, etc.) are also available.
- Acquisition value in excess of \$970,000 in non-consumable items were acquired and put into service by rural fire departments across the state.
- A large quantity of consumable items, including small tools, disposable (“one-time-use”) items, and miscellaneous equipment also were acquired and distributed to the rural fire service.

Training and Personnel Management



Fire Headquarters staff presently tracks the training, experience and qualifications for 1,891 wildland fire-qualified personnel in Indiana within the Incident Qualification System. In 2015, staff conducted 28 classes ranging from one to five days long that provided instruction to 1,451 students. The majority of students either belonged to rural volunteer fire departments or were affiliated with the DNR.

Volunteer Fire Assistance Grants

- The Volunteer Fire Assistance (VFA) program, formerly called the Rural Community Fire Protection program, is a federally funded matching grant program. VFA is a cooperative program between Indiana DNR Forestry, the U.S. Department of Agriculture Forest Service, and state and private forestry partners.
- VFA is a matching grant program created to assist in organizing, training and equipping rural and volunteer fire departments. Grants are matched 50/50 up to a maximum of \$5,000. Due to 2014 program guideline changes, no single piece of equipment may cost more than \$4,999.
- Rural departments and city departments with a population base of less than 10,000 may apply for VFA grants. Interested departments must complete an application and return it by March 1 each year. Applications received after March 1 will be considered for the next year's grant cycle. Certain restrictions apply to grant funds.
- In FY 2015, 55 rural and volunteer fire departments in Indiana had projects approved to fulfill a total funding request of \$496,415.



Dry Hydrant



Leaf Blower



Slip-on Unit

Fire Prevention

- The need to heighten public awareness about wildland fire has led DNR Forestry to adopt innovative methods to keep citizens and the fire-response community educated and informed. Through webinars and podcasts, precisely targeted fire-prevention, safety and informational topics can be distributed quickly and accurately. DNR Forestry continues to be involved in communities by presenting the Smokey© Wildfire Prevention message to local schools, county fair, safety fair, youth groups, Indiana State Fair, Riley Children's Hospital and more.
- The program's success is largely due to partnerships with other agencies and units of government, both public and private. One of the goals is providing co-operators, fire departments, and DNR properties

with educational and support materials and getting Smokey Bear visible through as many venues as possible.



within); stand-alone 13-foot by 8-foot inflatables, and the Smokey robot (a remote-controlled miniature Smokey in a firetruck with red lights, sirens and squirting water). This unit even has fire-prevention theme music. Having these resources to enhance and reinforce the fire-prevention theme has been instrumental in educating tens of thousands of Hoosier children about wildfire safety.

- Another successful education program on fire safety and burn prevention is through a partnership with McAxe & The Fire Crew© and special guest Kasey the Fire & Life Safety Dog©. The group comprises professional firefighters who use an energetic blend of music and comedy to help children bond with Kasey and the Crew to learn fire-prevention tips inside and outside of the home.

Tree Seedling Nurseries

- The Emerald Ash Borer made its presence known by affecting our ash seed orchard and surrounding trees. The removal of our white ash orchard took place to make room for another species of seed orchard. This orchard was approximately 2 acres in size and was planted in the early 1990s.
- Seedling sales were slightly down from previous levels, perhaps because of the overall weakened economy. Approximately 1.9 million seedlings were sold to Indiana landowners, generating nearly \$650,000 in revenue with approximately 3,000 Indiana residents ordering seedlings each year from the Indiana's State-run nurseries. A 3-cent increase in seedling prices across the board was enacted to better cover our costs of operation. This was the first increase in seedling prices since 2006.

- Approximately 38,000 tree seedlings were given to third-grade students across Indiana to celebrate Arbor Day and to teach schoolchildren the importance of planting trees. Many of our elected officials took part in the SB 690 program, to plant 100 seedlings for various community groups. Approximately 9,200 seedlings were shipped and planted in most counties throughout Indiana.



- This year we partnered with the American Chestnut Foundation in sowing 60,000 American chestnut seeds. This generated about 50,000 plants for out-planting and testing by the Foundation. Research is ongoing to develop a replacement to the American chestnut that can withstand the blight that ultimately led to the species'

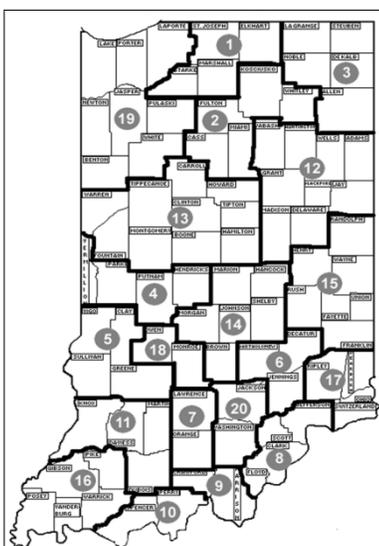
demise. The effort also brought in roughly \$20,000 in revenue by growing and producing that number of plants. Each group or family of nuts was identified by parent trees and sowed separately by hand to assure their origin could be tracked when out-planted. We hope that at some point in the future this program will be so successful that we will be able to offer this historic tree species for sale to the general public to re-establish this once major part of Indiana's forests.

- The partnership with the Indiana Department of Correction continues to be of great importance to the nursery section. The use of offenders in all aspects of nursery production is becoming more prevalent. Offenders are being used in most facets of nursery operations in order to meet budgets and production goals. From seed collection, sowing and assistance with cultural practices to seedling processing and packaging, roughly two dozen offenders are used each day. Our section goals could not be met without this partnership.
- The chemical fill station tower was rebuilt after many years in use. It allows a gravity-fed filling area for all seedling cultural applications. This 500-gallon-capacity tank can fill our equipment needs in minutes, allowing us to cover more acreage per day.
- Seed was acquired and sowed for 10 different species of wildflower pollinator species for a monarch butterfly project throughout the country. We intend to make these plants available for State agencies and may offer general sales of them to enhance habitat for this endangered species.

- Approximately 4 million usable seeds were collected to raise our multi-year age class production goals. Roughly 19 percent of this seed was again collected from State of Indiana seed orchards of various species. This seed was sown in approximately 25 acres of seedbed area to raise seedlings for sale in various age classes
- Unused pieces of logs remaining in log yards from State Forest timber sales continue to be hauled to the nursery to be used to heat the nursery facilities and as campfire wood to sell to campers at Starve Hollow. Offender crews cut and split these excess pieces, which otherwise would have gone unused on the forest floor, to generate revenue for the State of Indiana.
- Work continues on our new online Tree Order Program. It is in its final stages and will be rolling out in early 2016. This new program will work off of a live inventory and will enable customers to order and pay online. This has been a project of much testing and changes. Once the program is up and operating, we hope customers find it easy to access and convenient to use.
- While the Starve Hollow Lake dredge project continues, space has been provided for more dumping of dredged lake fill dirt in several areas upon the nursery grounds. Once the area is worked, smoothed out and settled, it should make for some ideal seed orchard sites in the future. This ongoing project will likely continue in the near future.



Cooperative Forest Management (CFM)



The state is divided into 20 districts. Each district includes between two and 10 counties. District sizes are based on the amount of forested acreage in each county and the number of tracts in each county enrolled in the Classified Forest & Wildlands Program (CFW).

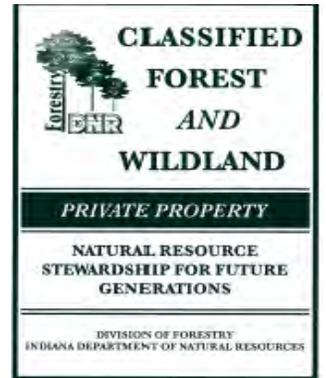
Full staffing includes 20 district foresters and two assistant district foresters. In 2015, two district foresters were hired, one district forester resigned, and the assistant state forester in charge of the Cooperative Forest Management Section retired. At the end of 2015, two district forester positions remain unfilled and an additional district forester had submitted his resignation, effective January 2016.

One district is being shared by two staff members, and the second district is being handled by an assistant district forester.

District foresters enjoy working with landowners and are perceived by the public as an unbiased provider of forestry information. Their hard work and dedication to Hoosier landowners is appreciated.

The CFM program performs the following duties related to private lands forest management:

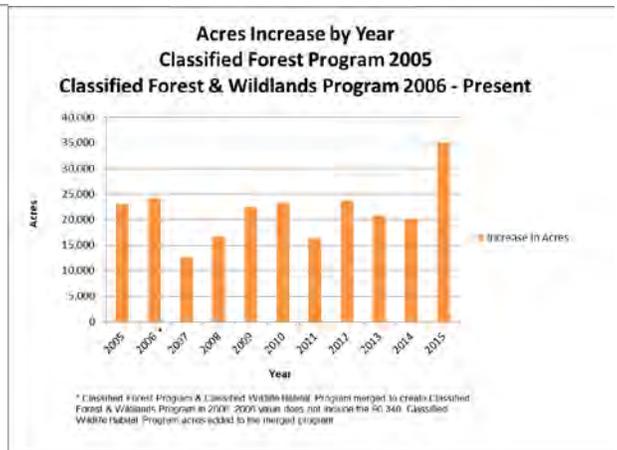
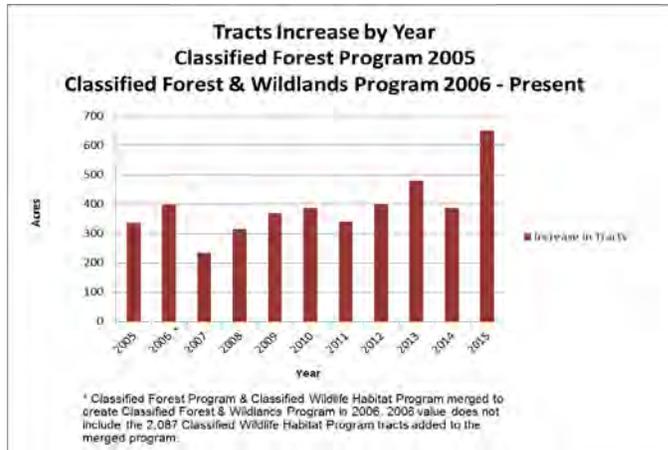
- Provides technical forestry assistance to private forest land owners.
- Administers the CFW Program, which includes:
 - Preparing stewardship plans for people interested in enrolling acreage in CFW
 - Enrolling acreage in CFW
 - Performing re-inspections on CFW parcels as required by law
 - Performing all necessary duties required by the Forest Stewardship Council® (FSC-C071226) third-party certification
 - Withdrawing property from the program when requested or required by law
- Serves as a technical service provider to the Natural Resources Conservation Service concerning the management of the Conservation Reserve Program (CRP) and the Environmental Quality Incentives Program (EQIP).
- Provides forestry education opportunities to landowners and other interested parties on a wide variety of forestry activities.



Classified Forest & Wildland Program

Program Enrollment

2015 was a busy year for the Classified Forest & Wildlands Program. There were two enrollment periods, in February and December, instead of one, due to a change in the state's property assessment date from March 1 to Jan. 1. Landowners must complete their applications before the property assessment date to ensure they receive the property tax break for that tax year. The net increase for 2015 was 650 tracts, totaling 35,203 acres.



The Classified Forest & Wildlands Program is a voluntary program. Landowners can withdraw their land from the program at any time, provided they pay the withdrawal penalties. Year of 2015 withdrawals from the Classified Forest & Wildlands Program was 34 tracts, totaling 1,160 acres.

Management Activities on Classified Forest & Wildlands

The Classified Forest & Wildlands law (IC 6-1.1-6) requires classified landowners to complete an annual report for each parcel of land they have enrolled in the program. In spring 2015, landowners reported activities they completed in 2014. Thirty-five percent of classified tracts reported doing at least one type of management activity. The five most frequently reported management activities were:

- 1) Timber stand improvement: grape vine control (13.4% of tracts)
- 2) Invasive species control (12.8% of tracts)
- 3) Brush piles (12.4% of tracts)
- 4) Wildlife food plots (8.9 % of parcels)
- 5) Trail improvement/Road work (8.2% of parcels)

Activity Completed	Number Times Activity was Reported	% of Total Annual Reports	Quantity Reported*	Average Accomplishment
<i>Boundary/Survey work</i>	440	3.0%	179 miles on 285 parcels	0.62 mile
<i>Brush pile construction</i>	1,822	12.4%	8,487 piles on 1,621 parcels	5 piles

<i>Invasive species control</i>	1,887	12.8%	20,520 acres on 1,467 parcels	14.0 acres
<i>Prescribed burning</i>	325	2.2%	2,426 acres on 216 parcels	11.2 acres
<i>Strip disking / Strip mowing</i>	903	6.1%	6,657 acres on 759 parcels	8.8 acres
<i>Timber harvest</i>	745	5.1%	21,319 acres harvested on 543 tracts	39.3 acres
<i>Timber stand Improvement : grape vine control</i>	1,975	13.4%	24,898 acres on 1,571 parcels	15.8 acres
<i>Timber stand improvement : other than grape vine control</i>	884	6.0%	12,630 acres on 638 parcels	19.8 acres
<i>Trail improvement / Roadwork</i>	1,209	8.2%	266 miles on 932 parcels	0.29 mile
<i>Tree planting</i>	435	3.0%	1,224 acres on 278 parcels	4.4 acres
<i>Warm season (prairie) grass planting</i>	205	1.4%	1,269 acres on 109 parcels	11.6 acres
<i>Water hole development</i>	270	1.8%	255 waterholes on 174 parcels	1.5 waterholes
<i>Wildlife food</i>	1,302	8.9%	3,483 acres	3 acres

<i>plots</i>			on 1,147 parcels	
<i>Misc. activities</i>	13	>0.1%		

**Not all landowners report the quantity accomplished.*

Classified Forest & Wildlands Reinspections

Classified Forest & Wildland tracts have to be visited once every seven years by the Division of Forestry (IC 6-1.1-6-19). At the re-inspection, the district forester makes sure the land is meeting the program requirements. In addition, the landowner has an opportunity to walk with the forester and ask questions specific to his or her property. In 2015, the Classified Forest & Wildland tracts inspected numbered 2,453, totaling 128,541 acres.

Indiana Classified Forest Certified Group

Landowners with at least 10 acres of Classified Forest can choose to have their land certified through the Forest Stewardship Council® (FSC®) by joining the Indiana Classified Forest Certified Group (FSC-C071226). This is a free benefit of the Classified Forest & Wildlands Program. Certification provides recognition that the forest is being managed in a way to that provides forest products while protecting for water, soil, plant, wildlife and special features. It also allows timber from classified forests to be sold as FSC certified.

In the fall, certification auditors come to Indiana to review the program. They visit properties, talk with landowners, and review program records to determine if the Forest Stewardship Council standards are being followed. The auditors then provide a report on what is going well and what areas need improvement. The full 2015 Classified Forest FSC audit report is available online, http://www.in.gov/dnr/forestry/files/fo-FSC_CFW_2015_Audit_Report.pdf.

District foresters visit timber harvests (pre-harvest, active harvest, post-harvest) occurring on certified Classified Forests to ensure best management practices are followed. In 2015, district foresters made 533 timber harvest inspections.



A landowner, district forester, and certification auditor stroll through fall colors during 2015 FSC certification audit.

General CFM

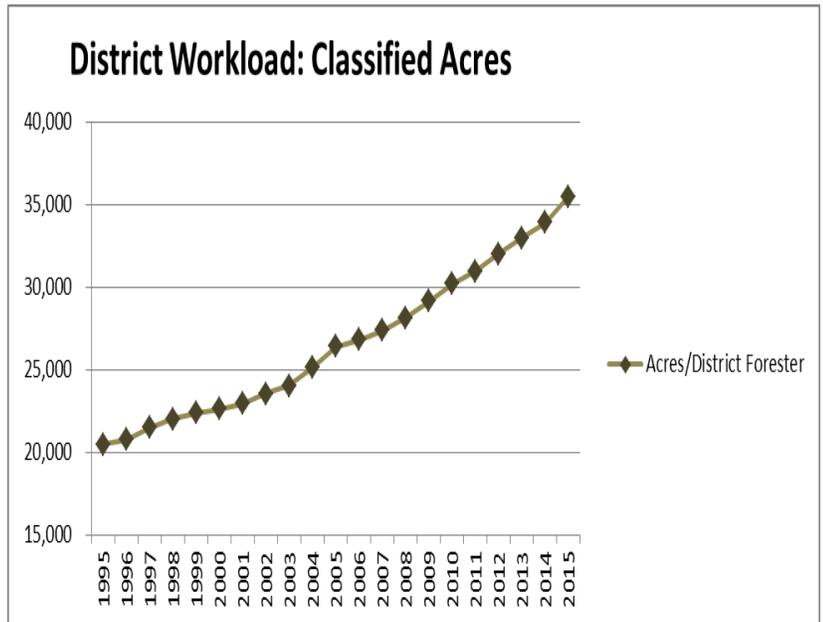
Assists and Referrals

District foresters not only work with Classified Forest & Wildlands landowners, but also provide forestry assistance to the general public and refer landowners to private-sector foresters for services not provided by the Division of Forestry. In 2015, the following assists and referrals were made:

- Technical Assists: 3,686 technical assists to landowners, local governments or conservation partners totaling 170,814 acres
- Referrals to private professional foresters: 1,864 referrals
- Incidental Assists (email, phone calls, etc.): 5,065 assists (no acreage figures are kept)

CFM Fees

The Division of Forestry is exploring options to fund the Cooperative Forest Management (CFM) section. Public demand for CFM services, in particular Classified Forest & Wildlands Program enrollment and management plan requests, have increased significantly due to property tax changes. The CFM section is currently funded through State general funds and federal grants. State and federal funding has not increased. In Indiana Code (IC 14-23-1-1), the Division is directed to charge for services. This has only been done sporadically since the law was put in place 1919.



In 2015, the Division of Forestry presented the following CFM fee proposal. Comments are being taken about the proposal online (<http://www.in.gov/dnr/forestry/2856.htm>) through fall 2016.

Lands enrolled in the Classified Forest and Wildlands Program

- Annual administration fee of \$2/enrolled acre

- Fee to be collected by county and forwarded to state. County receives 10 percent for collection.
- All services provided by district foresters are free for classified lands
- Current minimum tax savings for classified land is around \$4/acre

Lands not enrolled in the Classified Forest & Wildlands Program

Fees for services provided by District Foresters:

- Stewardship Plan: \$200
- Revision of Existing Stewardship Plan for Cost Share (non- CRP only): \$100
- Practice Plans for Invasive Species, Tree Planting (CRP plans not included): \$100
- Timber Stand Improvement (TSI) Marking: \$100 for up to 5 acres; \$200 up to 10 acres (maximum 10 acres per year per landowner)
- District Forester First Visit to Property: Free