



State of the Forest Products Industry in Pennsylvania 2020

Pennsylvania Hardwoods
Development Council



pennsylvania
DEPARTMENT OF AGRICULTURE

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF AGRICULTURE

Pennsylvania hardwoods are known throughout the world for their quality, beauty and sustainability. Pennsylvania leads the nation in the production and export of hardwood lumber. Our forests are the source of diverse secondary wood products ranging from veneer, cabinetry and flooring, to baseball bats, snow boards and drumsticks. With 16.6 million acres of forestland, Pennsylvania has the most abundant hardwood forest in the nation.

Pennsylvania forest products are a key component of the state's agricultural industry and the state's economy. An [economic impact study](#) released by the PA Department of Agriculture and Team Pennsylvania in 2018 showed the industry has \$21.5 billion in direct economic impact and \$36 billion in indirect impact on the state's economy. Since then, trade disputes with China and the COVID-19 pandemic have challenged the industry. More than 65,000 Pennsylvanians — ten percent of the state's manufacturing workforce — are employed in the forest products industry.

Because of the importance of the hardwoods industry to the economy of the commonwealth and its rural communities, the Pennsylvania Hardwoods Development Council was created in 1988. The council has played a major role in promoting and supporting the expansion of the state's industry during difficult times. This report is an update on the industry's status and the council's activities over the past few years.

The council is also working to secure economic development funding in order to conduct a statewide values chain assessment of the industry to examine supply chain issues and determine where values could be increased. The industry takes pride in knowing that when a tree is cut in the forest, all parts of the tree are used: veneer logs for valuable veneers; saw logs to grade lumber for furniture, cabinets, flooring and export; low grade lumber for pallets; small logs to pulp for paper products; sawdust for pellets; bark for mulch, and slash left in the woods to help regenerate a new forest. There is zero waste.

From the past 25 years working with the forest products industry, I know the industry is resilient and will adapt to the new world economy that emerges after the global pandemic.

I extend my appreciation to Governor Tom Wolf and to members of the General Assembly for their support of the Pennsylvania Hardwoods Development Council and the forest products industry over the years. Our forests have been a source of economic stability for our commonwealth for more than three centuries, and our responsible leadership and stewardship will ensure it continues to be a vital economic resource for future generations.

Russell C. Redding
Secretary of Agriculture
Chairman, Pennsylvania Hardwoods Development Council

Office of the Secretary

2301 North Cameron Street | Harrisburg, PA 17110-9408 | 717.772.2853 | www.agriculture.pa.gov

PENNSYLVANIA HARDWOODS DEVELOPMENT COUNCIL

The Pennsylvania Hardwoods Development Council was created in 1988 by the General Assembly to be responsible for the development, expansion, and promotion of the hardwoods industry in Pennsylvania and the world.

The council is chaired by the Secretary of Agriculture and includes representatives of several state agencies, the Pennsylvania General Assembly, and various sectors of the forest products industry and supporting organizations. The currently proposed House Bill 2149 will expand the council to include an additional Hardwood Utilization Group, a logger, a forester and the Secretary of the Department of Education. A listing of the current council members is on the last page of this report.

The work of the council is focused on its five core objectives:

1. To work with state and local government and other entities to promote sustainable forestry and access to the timber resources on both private and public land
2. To support and assist the forest products industry in developing domestic and international markets for value-added products
3. To promote and expand the development, processing and manufacturing of value-added forest products
4. To educate the public about the forest and forest products industry in Pennsylvania
5. To promote wood as an environmentally friendly, green product to architects, designers and consumers

Over the years, the council has provided key leadership in developing sustainable forestry, erosion and sediment controls, a model ordinance for townships to use for timber harvests, and best management practices. The council has assisted more than 100 companies in expanding their customer markets to exports in China, Vietnam, India, United Arab Emirates, the European Union and Brazil. The council participates regularly in the largest domestic trades shows in Atlanta and Las Vegas on behalf of the industry and is now participating in national trade shows to promote the use of American hardwood in Green Building that attracts architects and designers. In addition, the council has helped sawmills and secondary wood products expand using local and state economic development resources such as Industries First.

Much of the educational work of the council is focused on the Pennsylvania WoodMobile, a partnership project of industry and state government. The WoodMobile is a mobile walk-through interactive exhibit that travels throughout the state to promote sustainable forestry, provide education on forest pests and foster a better understanding of the environmental and economic importance of the industry. Nearly 1.9 million visitors have experienced the WoodMobile since 2002 and more than 220,000 students and teachers have participated in its school programs.

While the council has responsibility to promote the forest and industry across the whole state, the council works in partnership and financially supports three regional hardwood utilization groups: Allegheny Hardwood Utilization Group, Keystone Wood Products Association, and Northern Tier Hardwood Association. The council's goal is to form a fourth group in southeastern Pennsylvania to promote secondary wood products from York, Lancaster and the Philadelphia region.

PENNSYLVANIA HARDWOODS DEVELOPMENT COUNCIL MEMBERS

October 2020



Honorable Russell R. Redding, Chairperson — Secretary of Agriculture
Keith Atherholt, President — Lewis Lumber Products
Honorable Lisa M. Boscola — Senate of Pennsylvania
Patrick Cannin, Plant Manager — The AMES Company — Champion Wood Mill
Douglas B. Cummings, President — Cummings Veneer Products, Inc.
Mark Critz, Executive Director — Pennsylvania Rural Development Council
Honorable Dennis M. Davin — Secretary of Department of Community and Economic Development
Lucas Dillinger, Wood Procurement Manager — Domtar Paper Inc.
Honorable Cindy Adams Dunn — Secretary of Department of Conservation and Natural Resources
Dr. David Eissenstat, Acting Head — Department of Ecosystem Science & Management, Penn State
Honorable Yassim Gramian — Secretary of Department of Transportation
Anthony Hahn, President and CEO, Conestoga Wood Specialties Corporation
Honorable Scott Hutchinson — Senate of Pennsylvania
Marc Lewis, Representative — Pennsylvania Forestry Association
Melissa Morgan, Legislative & Policy Analyst — PA State Association of Township Supervisors
Jeffrey Nichols — Director of Procurement — Deer Park Lumber
Honorable Eddie Day Pashinski — Pennsylvania House of Representatives
Stephanie Phillips-Taggart, Marketing Coordinator — Keystone Wood Products Association
Honorable Kathy Rapp, Pennsylvania House of Representatives
Honorable Pedro A. Rivera — Secretary of Department of Education
Amy Shields, Executive Director — Allegheny Hardwood Utilization Group
Ellen M. Shultzabarger, Director/State Forester — Department of Conservation and Natural Resources
Dr. Allen Steele, Physical Scientist — US Department of Agriculture Forest Service
David L. Yeany, Owner/Producer — Yeany's Maple LLC
Sarah Hall-Bagdonas, Program Manager, Northern Tier Hardwood Association (Ex officio)
(Vacant) — Furniture Manufacturer
(Vacant), Executive Director — Pennsylvania Forest Products Association

Pennsylvania Hardwoods Development Council Staff

Jonathan P. Geyer

Acting Executive Director

Hardwoods Development Specialist

jongeyer@pa.gov

PENNSYLVANIA'S HARDWOOD INDUSTRY

Pennsylvania, the only state named for its forest, “Penn’s Woods,” has the largest hardwood forest in the United States and provides a host of benefits — air and water quality protection, recreational opportunities, wildlife habitat, biodiversity, carbon sequestration and wood products that are essential to our daily lives. The branding motto of the industry by the Hardwoods Development Council is ***Pennsylvania Hardwoods Stand for Quality***. The quality of our lives as Pennsylvanians who enjoy the benefits of the forest, and the quality of our forest resource are essential to the commonwealth. Its environmental and economic impacts span the state.



The quality of Pennsylvania’s black cherry, red oak, white oak, hard maple, white ash, and walnut is sought throughout the world, especially by furniture manufacturers. Our northern climate and shorter growing season, tighter growth rings, soil composition, mountainous elevations, and diversity of species, mean Pennsylvania lumber tends to be more stable and less likely to warp and twist after being properly dried. The colors of these species are often superior as well.

Eastern US Hardwood Production

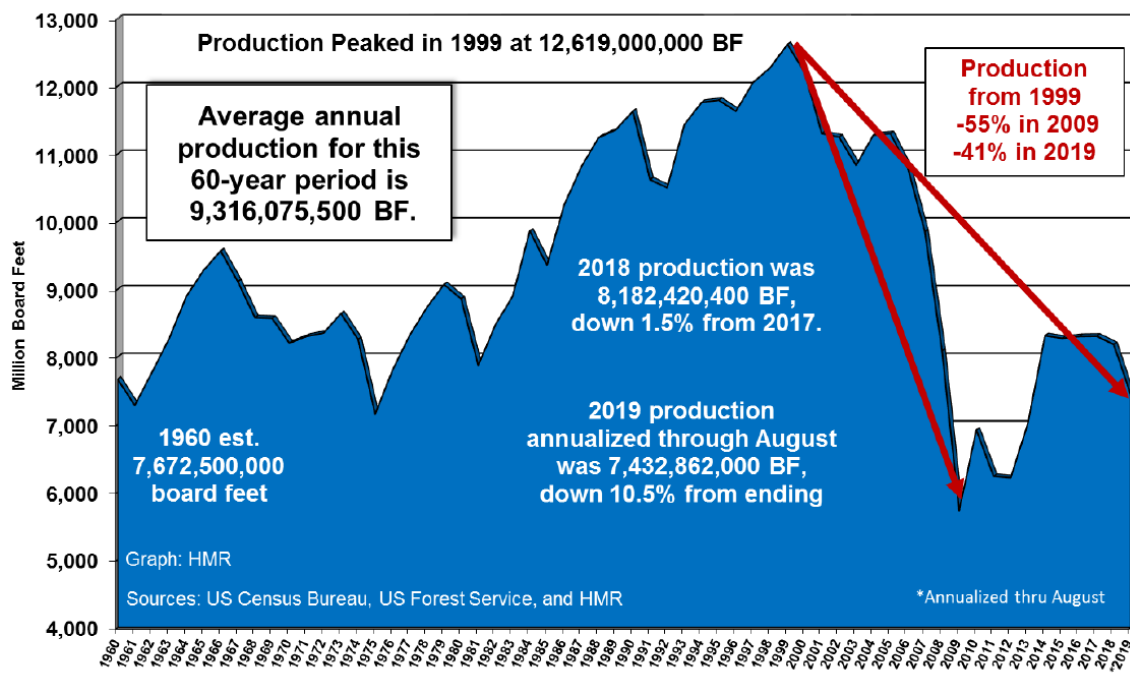


Figure 1.

Hardwood production in the United States peaked in 1999. Since then its growth and decline has been a rollercoaster. It is well documented that the ups and downs of American lumber production prior to 1999 followed the cycles of the US housing markets. When new homes are being built, it increases demand and value of the hardwood for mouldings, flooring, cabinetry and furniture.

The decline after 1999 was due to the furniture industry fleeing the United States for cheaper labor and lower production costs in China and other Pacific Rim nations. The housing bubble and economic collapse of 2008 had a significant impact just as the forest products industry was rebounding and developing new exports markets for their lumber. A 2008 Hardwoods Development Council-funded study by Penn State revealed that the direct economic impact of Pennsylvania's forest products industry was \$19 billion. From 2001-2010, the council assisted over 100 Pennsylvania companies on their first international trade mission or in-bound trade missions. These opportunities to meet potential buyers were extremely beneficial for small and medium-sized family businesses across Pennsylvania and helped them find new customers for their lumber and hardwood products.

Following the Great Recession of 2008, the forest products industry rebounded modestly, but this recovery was completely due to the increased demand of exports. In 2009, 20% of American grade lumber was exported, but by 2015 that had increased to 41% and by 2017 nearly 50% was exported. By then, one out of four boards were exported to China, which was by far the world's largest buyer of hardwood, purchasing more than the entire European Union.

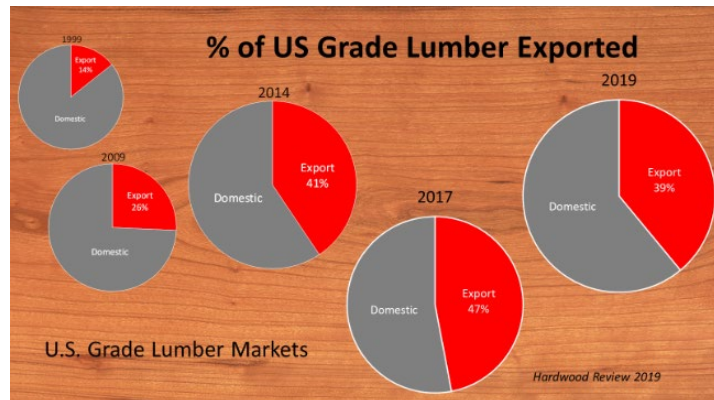


Figure 2.

The growth in China's hardwood market was initially due to large furniture manufacturers moving from the United States and Europe to China in search of lower wages and lower production cost. But following the Great Recession, the volumes of hardwood increased suddenly due to the demand of the emerging middle class in China who loved American hardwood, especially red oak – a species that had fallen out of favor in the United States. China's market grew so fast that by March of 2018 they were on a record pace, having already purchased nearly 250,000 cubic meters of American hardwood, or approximately 6,200 forty-foot containers. Some Pennsylvania hardwood exporters were exporting 50-90% of their grade lumber production to China. But then the US China trade wars began.

Declines in the US market first occurred during the threats of tariffs on hardwoods in 2018. Tariffs of 5%, 20% and 25% were placed on various species in April 2019, and further cuts occurred. By the end of 2019, lumber exports were down 40% from the high in 2017, or \$765 million in value and 514 million board feet in volume. Unlike other agricultural commodities for which farmers received relief for lost income due to the trade war, no assistance was given directly to the forest products industry. However, on February 28, 2020, the tariffs were removed as part of the Phase One Economic and Trade Agreement between the United State and China. Shortly thereafter, sales to China began to climb despite COVID-19 impacting both nations.

Pennsylvania has historically provided about 10% of the nation's supply of hardwood lumber and leads the United States in the export of lumber. Pennsylvania's forest products industry mimics the national story. To our industry's detriment, Americans have chosen alternatives to American wood for their furniture, millwork, kitchen cabinets and flooring. Exports helped to offset the major decline in the domestic consumption of American hardwood after the Great Recession.

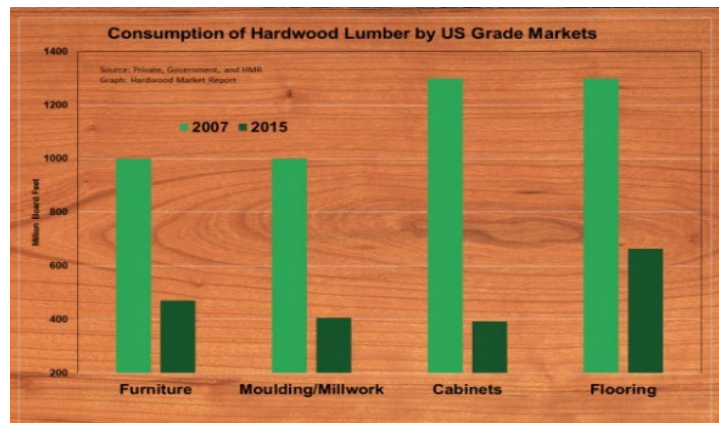


Figure 3.

In 2017, Pennsylvania exported a record \$561.7 million dollars of hardwood lumber, and a near record of \$129.9 million in logs. The department-sponsored 2018 study [Pennsylvania Agriculture: A Look at the Economic Impact and Future Trends](#) showed that Pennsylvania's forest products industry was responsible for 64,078 jobs, \$3.5 billion in earnings, \$21.6 million in direct economic impact and \$36 billion in total economic impact. The industry was well on the way to recovery, but by the end of 2019, exports had decreased 17.5% (\$463.2 million) for lumber and were down 34.2% (\$85.4 million) for logs, directly related to the loss of the Chinese market due to the US-China trade war and the early stages of the COVID-19 pandemic in China.

While there was good news at the end of February 2020 regarding the removal of the Chinese tariffs, the impact of the global pandemic closed the state's forest industry in mid-March. Within days, Pennsylvania's government leaders recognized the importance of keeping the supply chain running and reopened the industry. If America needed toilet paper and paper for personal protection equipment, then the loggers, foresters, sawmills, veneer mills and other secondary wood-processing mills would need to be open to supply chips and pulp to paper mills. Only kitchen cabinet manufacturers remained closed.

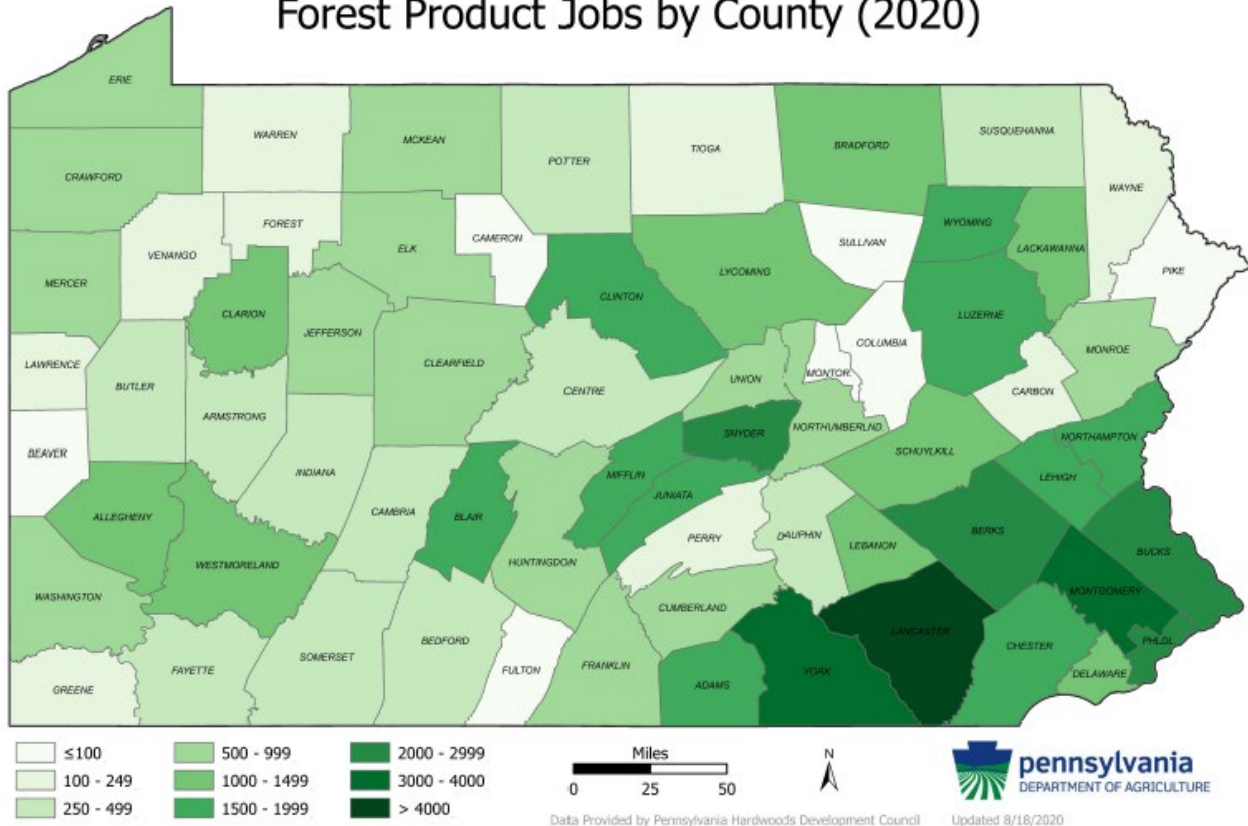
Pennsylvania Jobs

In 2005, before the Great Recession, there were 88,829 Pennsylvanians employed at 2,564 establishments in Pennsylvania related to forestry and logging, lumber and wood products, furniture and fixtures, and paper and allied products. During the recession and recovery many small sawmills closed, loggers were lost to more lucrative jobs in the oil and gas industry, and many companies invested in technologies that reduced employment. Since the Great Recession employment statewide has been between 60,000 and 66,500. As of the second quarter of 2020 there are 65,773 working at 2,169 establishments.

Pennsylvania Forestry Products Establishments				
NAICS	2005	2009	2015	2019
Forestry/Logging (113)	282	226	232	313
Lumber/Wood Products (321)	1,077	1,038	945	974
Paper Manufacturing (322)	318	288	258	251
Furniture & Fixtures (337)	887	753	645	638
TOTAL	2,564	2,305	2,080	2,176

Pennsylvania Forestry Products Employment				
NAICS	2005	2009	2015	2019
Forestry/Logging (113)	3,690	2,236	2,710	2,821
Lumber/Wood Products (321)	32,940	21,961	23,422	24,203
Paper Manufacturing (322)	26,723	21,861	23,122	21,951
Furniture & Fixtures (337)	25,476	17,061	17,186	17,122
TOTAL	88,829	66,141	66,440	66,096

Forest Product Jobs by County (2020)



Surprisingly, more than 31,000 of the forest products industry jobs, or nearly half, are in south central and southeast Pennsylvania. With 5,756 jobs, Lancaster County is first in the state, with many Amish sawmills and furniture shops as well as several large kitchen cabinet manufacturers. York County is second, with 3,225 jobs which includes a large paper mill, several secondary wood product manufacturers, along with other sawmills and forestry/logging businesses.

It is important to understand that sustainable forestry, timber access, and logging issues impact the whole state. If municipalities attempt to unreasonably restrict timber harvesting or legislation is passed that limits forestry operations, it negatively impacts jobs in the secondary wood products industry across the state especially in south central and southeast Pennsylvania.

Logging and Forestry

Over the past ten years, nearly 150 loggers have taken jobs in the gas industry or aged out of the workforce. Loggers are generally independent contractors rather than employees. This is somewhat driven by the high cost of insurance for those in this high-risk occupation. The council has been working with a subcommittee of the Governor's Green Ribbon Task Force on improving worker safety and workman's compensation rates for loggers. Rates have come down from \$54/\$100 income in 2018 to \$37/\$100 income in 2020 based only on incident history and actuarial data. However, this cost is still too high for most loggers. Loggers in New York state pay \$13-\$17/\$100 income. There is a plan to develop a

group insurance plan with a required and accountable safety program, but it has been delayed due to COVID-19 financial stress on the state budget.

Often loggers are drawn to the occupation by an independent work ethic and love for the forest. The jobs of more than 63,000 other employees in the supply chain depend on an occupation characterized by working alone. Coupled with a declining enrollment in college programs for foresters and forest technicians and a lack of internships creating a funnel into the career path the field faces recruitment challenges that may lead to a workforce shortage. Loggers are not permitted to encourage interested young people to work with them in the woods as apprentices until they are 18 or older. By this time, many young adults have developed other interests. With growing misunderstanding of the positive environmental impact of forest management, many young people are discouraged from becoming foresters. These workforce development issues are a growing concern to this industry.

The appendix includes information about various degree programs offered by Penn State and its affiliates.

Sawmills and Secondary Processing

Many of the sawmills in Pennsylvania are family-owned operations, many in the fourth and fifth generations. Family-owned sawmills are proud supporters of sustainable forestry because of the need for developing good community relations and making sure there is a forest resource available for the next generation. Many of these sawmills are voluntary participants in third-party certification systems such as the Forest Stewardship Council (FSC) or Sustainable Forestry Initiative (SFI). Others who may not be certified are supporters and agree to the same Best Management Practices.

Pennsylvania has more than 2.5 million acres of FSC-certified forest and more than 2.3 million acres SFI-certified forests. The Department of Conservation and Natural Resources (DCNR) had their land FSC-certified in 1999 and SFI-certified in 2019. Buying products with the FSC or SFI logo assures the buyer that the product was made with lumber from a sustainable managed forest and by chain-of-custody companies that are committed to meeting the environmental requirements of the certification systems.



Sawmills and secondary manufacturing businesses are also struggling to find and maintain employees. They offer excellent on-the-job trainings for persons of various skill levels. Coveted positions such as lumber-graders, sawyers and sales staff are often hired from within the company from among employees who have demonstrated a good work ethic. There are some vocational high schools teaching woodworking and wood products, but the well trained students completing these programs are hired quickly. Unfortunately, there is concern that high school guidance counselors and parents are discouraging careers in manufacturing and vocational trades.

Technology is advancing the forest products industry and demanding a workforce with specialized skills and training. Log-scanners and modern bandsaws increase the yield of grade lumber from logs. Large sorting machines reduce the number of employees needed to sort and stack lumber. CNC routers dramatically shorten the time it takes to make mouldings, dimension, flooring and many other products.

Computer-driven dry kilns improve and shorten drying time. Scanners and digital recording track inventory and profit/loss areas.

Pennsylvania is host to a wide variety of secondary wood-processing manufactures from veneer, flooring, dimension and furniture parts, to products such as baseball bats, snow boards, drumsticks and toys. While hardwood flooring has become extremely popular over recent years, unfortunately many homeowners are buying cheaper laminate floors made in China rather than investing in solid hardwood flooring that increases home values.

Furniture and Kitchen Cabinet Manufacturing

Historically, Pennsylvania was a major center for furniture manufacturing, but following the Civil War and by 1939 much of that industry had moved to North Carolina and continued to grow there through the 1980's. However, at the turn of the century there was a mass exodus of the furniture industry from the United States to China and other Pacific Rim nations seeking lower production costs and labor rates. Pennsylvania also lost several of the large furniture manufacturers such as Pennsylvania House and Ethan Allen.

Wood furniture manufacturing in Pennsylvania is now more artisan style manufacturing mainly located in Philadelphia and southeast Pennsylvania, or traditional Amish made furniture. The growth of the artisan furniture manufacturers in Bucks County and southeast Pennsylvania may have grown in part from students of George Nakashima in New Hope. Mr. Nakashima is internationally recognized for his 20th Century American Art Furniture. Philadelphia also hosts the Philadelphia Furniture Show annually to showcase artisan style furniture and furnishings from artisans/craftsman from the east coast. Flitch or live-edge furniture has increased in popularity in recent years.

While the furniture industry was negatively impacted in the state, kitchen cabinet manufacturing has remained strong. Pennsylvania has many large kitchen cabinet manufacturers, especially in southeast Pennsylvania. However, this industry is especially impacted by fashion trends in kitchen design. While once red oak dominated kitchen cabinetry, currently the trend for white or opaque (painted) kitchens is popular making hard and soft maple the dominant species for kitchens. Consumers for home remodeling projects are also highly influenced by the HGTV and are often choosing lesser quality cabinets made of medium density fiberboard (MDF). It is hoped that the new Real American Hardwood promotion that will focus on healthy homes will help grow the domestic demand for solid hardwood products including cabinetry, furniture and flooring.

Paper Industry

The paper industry that supplies printing and writing paper has experienced a decline of 3-4% every year since 1990. Now in 2020, with schools, government and many industries closed due to COVID-19, consumption of printing and writing paper is expected to decline much more. In 2019, and by the end of 2020, 18% of the paper industry in North America will either close or be converted to other products.

The summer of 2020 saw many grades of paper consumption fall to half of what was previously used. The decline in paper markets has been impacted by increased digital storage and document transfer, the transition to e-commerce, more people working from home, decreased newsprint demand, and lower mail volume. There is some expectation that paper consumption will increase as schools open and people return to offices, but consumption may never return to pre-COVID demand.

In Pennsylvania, there are 251 paper-related companies, but there are four large facilities that employ the bulk of the employees. Paper facilities in Spring Grove and Johnsonburg, and tissue facilities in Lock Haven and Mehoopany are major drivers in the paper market.

The tissue industry saw a surge in demand in March 2020, but will no doubt return to normal levels once the supply is certain. Many paper-related industries are also consolidating and moving to Asia and other countries. The decline of the paper industry impacts the value of low-grade logs or pulpwood. While tissue facilities use significant volumes of imported pulp from Canada and South America, the quality-paper industry uses chips and pulp from Pennsylvania. Currently the low value of pulp wood and low-grade material is good for the paper industry but means there is limited supply because landowners are not harvesting when prices are low.

Summary

The forest products industry is facing several issues as it moves forward:

- Continued access to the timber resource
- Workforce development and recruitment
- Changing trends and fashion
- Perceived higher cost of hardwood products
- Consumers choosing alternative products that look like hardwood
- International and domestic market obstacles

The forest products industry depends on the complete supply chain of the forest resource for not only a healthy industry but also for healthy forests. It has been well documented that when the forest resource has high value, that forest landowners manage their forests in ways that are healthy for the forest. The United Nations in 2010 reported following their study of the world's forest, that the largest threat to the forest of North America is the underutilization of the forest resource. While the United States leads the world in sustainable forestry, unfortunately many forest landowners no longer primarily own their forest land for its timber resource.

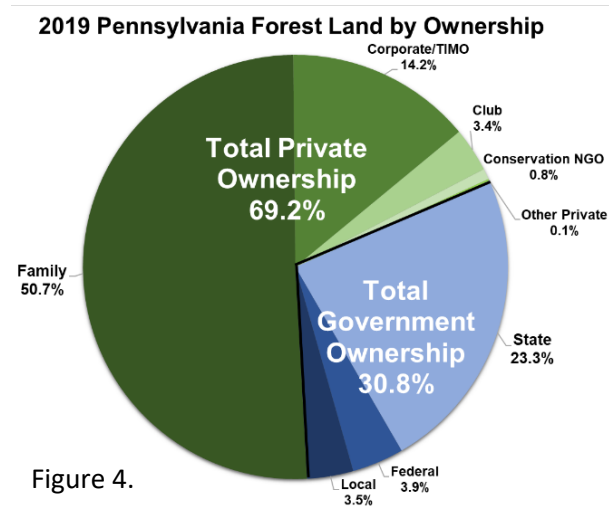
PENNSYLVANIA'S FOREST RESOURCE

The supply chain begins with the forest landowner who manages their land for a combination of reasons including wildlife habitat, carbon sequestration, firewood, recreations and hunting, and sometimes just for its aesthetic value or beauty. It is important though, to realize that these goals can be achieved while also managing the forest for its timber resource. The decisions the forest landowner makes or doesn't make have an impact on the quality and value of the forest and its resource, now and in the future.

Historically, the USDA Forest Service would do a forest inventory in any given state about every 15 years. These inventories provided a glimpse of the forest statewide, but trend identification took decades. In 2000, the Forest Service moved from periodic surveys to an annual Forest Inventory and Analysis (FIA) program that measures a portion of each state's forest resource every year, on a 5-7-year cycle. The annual studies build on the past with greater accuracy and provide a 7-year remeasurement timeframe, allowing for continuous trend analysis.

Based on the Forest Inventory and Analysis data from the USDA Forest Service's Northern Research Station, updated in July of 2020 for 2019: Pennsylvania now has 16,621,968 acres of forest land, or is 58% forested when lakes and rivers are removed from the total acreage. From 2004-13, the forest in Pennsylvania increased from 16.573 million acres to a high of 16.999 million acres; thus, the often quoted 17 million acres of forest in Pennsylvania. During these years, there was a net increase of forest land due to farmland in northeast and northcentral Pennsylvania reverting to forest, which offset the loss of forest land in southern counties due to development.

However, since the peak of 2013, Pennsylvania has had a net loss of 378,000 acres of forested land. The 2019 data shows that when comparing the previous seven-year cycle, that 48.6% of the loss can be attributed to forest land being converted for agricultural uses, 43.1% to development including rights-of-way and gas development, and 8.3% to new wetlands and other natural uses.



Compared to some states that have large tracts of national parks or forest, Pennsylvania has a relatively good balance of ownership between government and private owners. The federal government owns 3.94% of the forest land in Pennsylvania, with the Allegheny National Forest being the largest land holding. Additional acres of forest are owned by the National Park Service, US Fish and Wildlife and the US Department of Defense. The commonwealth of Pennsylvania has three major forest landowners that together own 23.3% of the state's forest: the DCNR Bureau of Forestry – 2.2 million acres, DCNR Bureau of State Parks – 300,000 acres, and Pennsylvania Game Commission – 1.5 million acres, but not all those

acres are forest. Local governments own an additional 3.5% of the forest for local parks and watershed protection. This balance of ownership between government (30.8%) and private (69.2%) is critical for the forest products industry in the state. Because the government land has annual harvesting goals to meet important objectives such as forest health and age-class distribution, the government continues to

harvest when prices are low and private forest landowners are not selling timber. This sustained supply to the forest products industry during the Great Recession in 2008-09 saved many jobs in Pennsylvania and may do so again during the current pandemic.

Today, 69.2% of the forest is privately owned. This includes 2.35 million acres owned by corporations including timber investment management organizations (TIMOs), 559,793 acres owned by clubs, and 136,335 acres owned by conservation groups. The remaining 8,428,507 acres of private ownership is owned by roughly 740,000 Pennsylvanians. Of concern here is the parcelization of the forest when more and more people own smaller acreages of forest. Forty years ago, in 1980, the average forest landowner in Pennsylvania owned just under 25 acres, and today the average ownership is 11.4 acres.

While Pennsylvania continues to have the largest hardwood forest in the United States, with nearly 90% of 16.6 million acres, it also has the largest hardwood forest with over 121.6 billion board feet of sawtimber. Sawtimber is considered trees with a diameter at breast height (DBH) of greater than 11 inches. Since 1955, the sawtimber volume in Pennsylvania has increased more than five times.

Despite the decrease in timberland acreage since 2013, sawtimber volume has increased 7% to 121.6 billion board feet. There are now an estimated 7,600 board feet per acre of timberland, an increase of 9% over that time. Net growth remained relatively stable between 3.0 and 3.1 billion board feet per year despite the increased mortality brought about by pest outbreaks. With harvests estimated to be roughly 1.0 to 1.1 billion board feet per year since 2013, net growth currently outpaces removals by a factor of 2.9 to 1, putting annual net change in the area of 2 billion board feet per year.

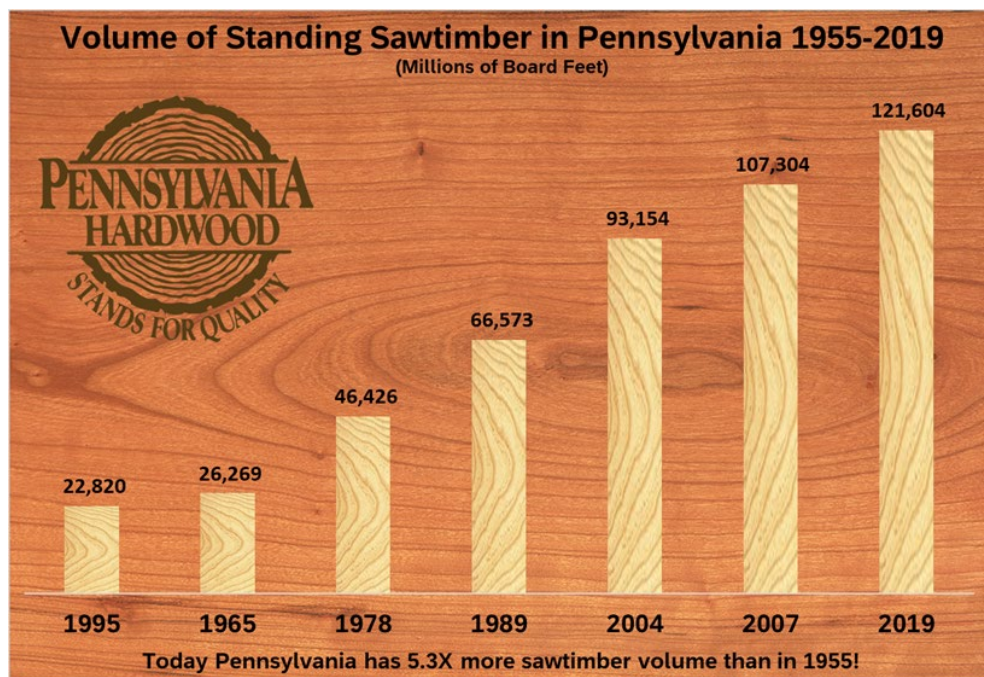


Figure 5.

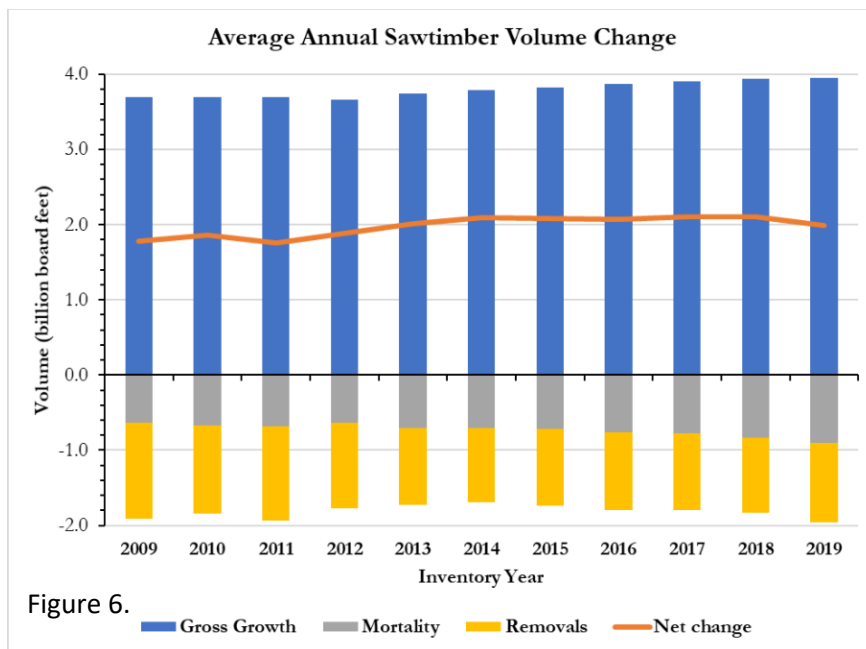


Figure 6. shows the steady growth of sawtimber (blue bars) and the relative stable harvest rates or removals (yellow bars), and the increasing mortality (gray bars). The orange line shows the net change of forest volume around 2 billion board feet being added every year. Since 2014, the mortality rate is increasing due to white ash due to emerald ash borer and to a much lesser extent mortality of American beech and Eastern Hemlock.

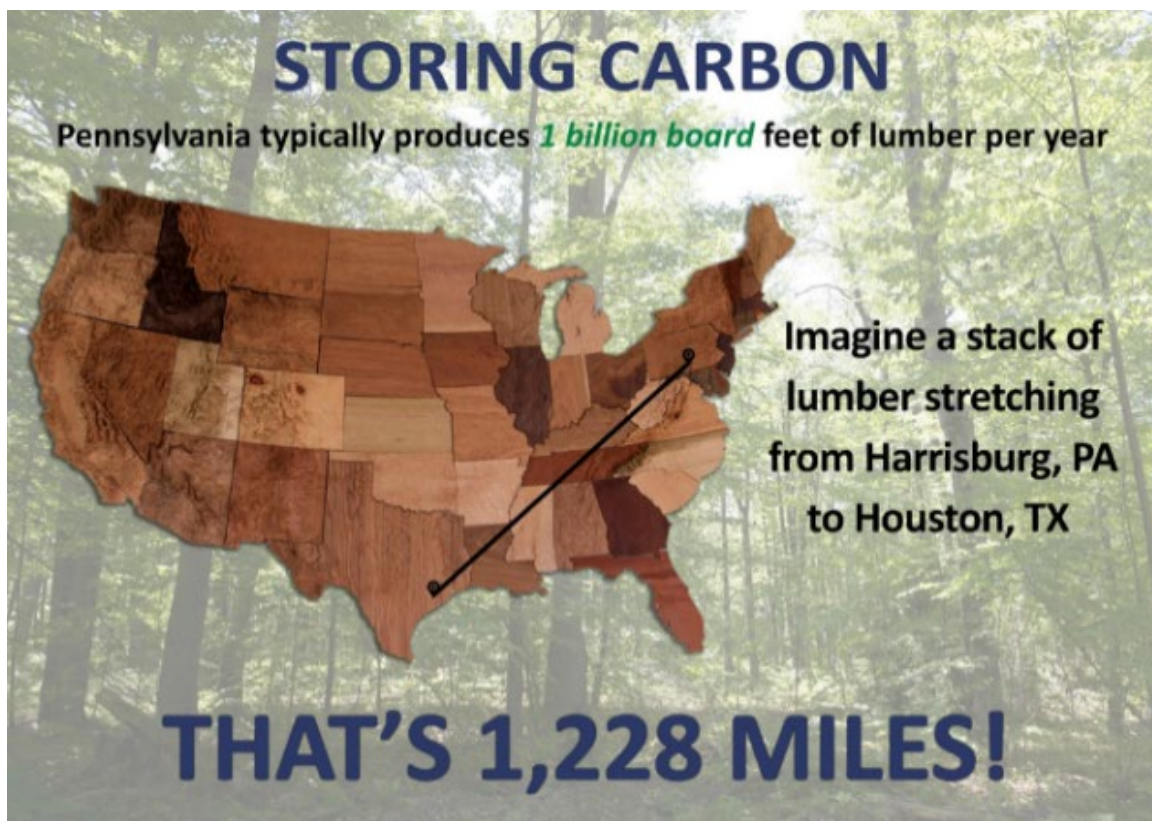
There are over 100 species that grow in Pennsylvania's forest and are tracked by Forest Inventory and Analysis; however, just 16 species or species groups make up 93% of the forest. The most valuable species to the hardwood industry includes the oaks, maples, cherry, poplar, ash and black walnut. Because white oak and chestnut oak are both sold as white oak they are grouped in the chart below, the same goes for the other red oaks category and the hickories.

Pennsylvania is known as the "Black Cherry Capital of the World." Black Cherry has historically been one of the more valuable hardwood species. Nearly 30% of the nation's black cherry volume is in Pennsylvania. Growing conditions in northwest and north central Pennsylvania make it the highest quality. White oak, in demand for cooperage and flooring in Europe has also been of higher value. Black walnut with its distinctive dark brown color is always in demand and of high value. Fashion trends set in Europe and North America often contribute highly to the changing value of our hardwoods. Prior to 2000, the most popular species in the United States for flooring and kitchens was red oak, but now most red oak is sold to China, where it is extremely popular with the emerging Chinese middle class.

2019 Pennsylvania Forest Inventory

Rank	Species	Percent of Forest
1	Soft Maple	15.4%
2	Northern Red Oak	13.0%
3	Black Cherry	11.4%
4	White Oak + Chestnut Oak	11.2%
5	Hard Maple	7.4%
6	Yellow Poplar	6.9%
7	Eastern Hemlock	4.9%
8	Other Red Oaks (Scarlet+Black)	4.9%
9	Eastern White Pine	3.8%
10	White Ash	3.6%
11	Sweet Birch	2.8%
12	Hickory	2.8%
13	American Beech	2.3%
14	American Basswood	1.4%
15	Bigtooth Aspen	1.0%
16	Black Walnut	0.7%
	Other Hardwoods	4.7%
	Other Softwoods	1.8%
	Total Hardwoods	89.5%
	Total Softwoods	10.5%

Pennsylvania's thriving forest products industry harvests between 1 billion to 1.3 billion board feet of forest volume annually. To put that into perspective – one board foot is a piece of lumber 12 inches wide by 12 inches long and 1-inch thick. One billion board feet is a stack of lumber 2.5-feet high by 5-feet wide, spanning from Harrisburg to Houston, Texas. More than 65,000 Pennsylvanians depend on that resource for their jobs at over 2,100 different logging operations, sawmills, secondary wood manufacturers, veneer slicers, flooring manufacturers, furniture and kitchen cabinet manufacturers and paper mills. Governor Tom Wolf, a former kitchen cabinet manufacturer and an original member of the Hardwoods Development Council in 1989, recognized the importance of Pennsylvania's forest resource and industry, and formed the Green Ribbon Task Force. The council has an excellent working relationship with the Department of Conservation and Natural Resources and both DCNR's secretary and state forester are members of the council. The council and Bureau of Forestry partner on many projects.



GOVERNOR'S GREEN RIBBON TASK FORCE

Green Ribbon Task Force on Forest Products, Conservation and Jobs

The Green Ribbon Task Force on Forest Products, Conservation and Jobs was created in 2015 by Governor Wolf to conserve Pennsylvania's unique and precious forests, while growing forest jobs. Experts in industry, academia, conservation, and state government established a series of recommendations designed to conserve and improve nearly 17 million acres of forest and the livelihoods it supports across the commonwealth. This interdisciplinary effort highlighted the integral nature of Pennsylvania's forests to its past, present and future.

The task force worked to identify programmatic opportunities, public investments, legislative and policy solutions, and other measures for conserving forestland and supporting forest-based products and jobs. The final objectives laid out goals to: restore forest-related jobs that pay in Pennsylvania; expand markets for local wood products grown and manufactured in Pennsylvania; expand conservation and improve sustainability and resiliency of Pennsylvania's forests; increase availability and variety of timber and non-timber products grown in Pennsylvania; and increase public use and value of working forestlands for multiple benefits and purposes.



The accomplishments of the Task Force by 2020 have been numerous— a testament to the partnerships and collaborative efforts spearheaded by the Department of Conservation and Natural Resources (DCNR) and the Department of Agriculture (PDA), in cooperation with the Department of Community and Economic Development (DCED), Department of Labor and Industry (L & I), and the Department of Education (PDE). Progress includes partnerships with municipalities to raise the Payments In Lieu of Taxes (PILT) from \$3.60 per conserved acre to \$6.00 per conserved acre to support forest communities and ensure forest conservation is compatible with other needs. It has also found success in legislative action in the Controlled Plant and Noxious Weed Act of 2017 to prevent economically damaging invasive species, and the development of an ongoing coalition to address workers' compensation barriers for the logging profession. The work of the task force elevated the conservation and forest products industries allowing DCNR to garner \$175,000 from the U.S. Endowment for Forestry and Communities to improve the forestry field through an assessment of the Enrolled Forester Program to explore additional economic opportunities for private forest landowners, and conserve forestland across the commonwealth.

Further efforts of synchronizing conservation and economic progress are evidenced by an innovative partnership to enhance the forestry workforce was created between DCNR and Department of

Corrections (DOC)—the Correctional Conservation Collaborative, which focuses on the urban and community forestry workforce to train incarcerated or soon to be released inmates for future work in arboriculture. Similarly, the Hardwood Development Council is hoping to receive grant funding to perform a comprehensive value-chain study to build greater regional wealth in Pennsylvania through the existing forest resources and address greater economic development in the field.

Workforce and sustainable economic development initiatives continue to be at the forefront of Secretary Dunn’s and Secretary Redding’s missions for their respective agencies. DCNR continues to promote its role in Pennsylvania’s forest economy and to educate on the idea that conservation and economic development are not contradictory, but rather, complementary. The task force is continuing to address workers’ compensation barriers for loggers, promote working forests and conservation efforts, as well progressing youth engagement, career pipelines, and education, outreach, and relevance issues. DCNR is working closely with American Forest Foundation and The Nature Conservancy on carbon-offset programs for family forest landowners as programs are piloted across Pennsylvania — providing economic opportunities for landowners and job opportunities for consulting foresters.

The Task Force has built an important framework that is now foundational in DCNR and PDA’s work. Governor Wolf’s effort to promote interagency cooperation and collaboration continues to manifest itself in progress and will be felt for years to come.

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES BUREAU OF FORESTRY



With a broad leadership role in ensuring the long-term conservation of the commonwealth's forests, DCNR Bureau of Forestry relies on many partners to help achieve this challenging but essential mission. The health and viability of the Penn's Woods is, in many ways, inextricably tied to a healthy forest products industry that shares with the bureau and its partners a commitment to ensuring a sustainable future. The last several years have seen many expressions of these vital partnerships and examples of work made possible by collaborate efforts aimed at improving the conditions and our understanding of Pennsylvania's rich forest resources.

State Forest SFI Certification

In December 2018, Pennsylvania state forest lands became certified to the Sustainable Forestry Initiative (SFI) standard. State forest lands have been certified to the Forest Stewardship Council (FSC) standard since 1998. This added level of certification more deeply expresses the Bureau of Forestry's commitment to sustainable forestry, and the dual certification gives loggers and producers access to two certified wood and paper markets, when using timber from state forest lands. Many industry members commented during the 2016 State Forest Resource Management Plan process that the bureau should explore SFI certification. The bureau is proud to add this layer of certification onto the Commonwealth's 2.2 million-acre state forest system.



Good Neighbor Authority

The bureau and the Allegheny National Forest have a long history of collaboration on a wide range of forest management issues. In 2018, the two agencies signed a Good Neighbor Authority Master Agreement, which allows the bureau to enter into supplemental agreements with the ANF to perform forest and watershed restoration activities on federal lands.

Thus far, the bureau has assisted the ANF through three projects. The first of these allows for cooperation in performing ecological inventories in forested areas proposed for forested restoration activities on the ANF thus enhancing the USDA Forest Service's ability to accomplish ecological restoration activities. The second project allows for the bureau to cooperate with the ANF to conduct the full suite of forest and watershed restoration activities allowable by the Allegheny Land and Resource Management Plan and authorized under the Good Neighbor Authority. The initial activity performed under this agreement was a 56-acre timber sale set for bid on September 2, 2020. Most recently, the bureau began assisting the ANF with installation of permanent prescribed fire monitoring plots that will inform effectiveness monitoring and ANF staff as they expand their use of prescribed fire in oak ecosystems.

The bureau and the ANF will continue to explore ways to cooperate upon and support restoration projects where they fit within the context of mutually held landscape management goals.

State Forest Timber Sales and the COVID-19 Pandemic

In March of 2020, the onset of COVID-19 changed everyone's lives in ways never seen before. Businesses across Pennsylvania were impacted by the virus and mitigation efforts. State government, the wood products industry, and operations on state forest land were no exception. Initially, the bureau postponed timber sale bidding while new protocols were established to address not being able to conduct public bid openings and being able to execute timber sale contracts. In most cases, the new process, which relies on electronic submissions, has expedited contract approvals.

The bureau recognizes the challenges to the industry due COVID-19 and is working with operators to complete sales contracts by granting extensions and helping to reassign sales, when possible. The bureau is also assisting by continuing to aid the timber industry and operators by advertising and selling timber sales. While generating important revenue for the commonwealth and completing planned forest management activities, the bureau is committed to doing what it can within commonwealth contract rules and guidelines to assist the industry during this difficult time.

Facilitating Conversations to Underscore the Importance of Working, Privately-owned Forests

Pennsylvania's privately-owned working forests play a critical role within industry and serve as a vital tool in maintaining a healthy forest. DCNR partnered with USDA, Natural Resources Conservation Service (which provides funding to support private forest management) to convene a team of partners to understand current capacities and areas of collaboration to best meet forest landowner needs and desires. Representatives from the forest products industry actively participate in this "Woodland Stewardship Innovation Team." This has led to conversations with forest industry and other partners on maintaining and actively managing working forests to support a broad array of values including clean water, habitat, jobs, and wood products. These discussions have led to deeper understandings of various partners' viewpoints and the diversity of issues and concerns across the commonwealth to facilitate future discussion and collaboration on working forests.

PDA, HDC and DCNR worked to revise a guidance document on model timber harvest ordinances. The process included direct conversations with the land trust community, which has significant roles to play in managing working forests.

Timber Products Output Survey

Careful monitoring of the timber products output is essential to formulate policies and programs that support the wood economy of Pennsylvania. To bolster efforts to evaluate ongoing trends, the bureau has re-invigorated efforts to conduct a Timber Product Output (TPO) survey on a regular basis (every 4 years). This survey assesses trends in harvest and production, in terms of region, volume, species, product type, among other myriad demographics that provide insight into the current status of wood-products industry across the commonwealth. Surveys were completed for 2012 and 2016 production and reports can be found online [here](#). In addition, USDA Forest Service also compiles statistics from primary wood processing facilities which can be used in conjunction with the bureau's TPO and compared across states and regions in the US.

DOMESTIC MARKETING

The council promotes the domestic consumption of Pennsylvania hardwoods at various trade shows across the US. When attending wood-based shows like the International Woodworking Fair (IWF) in Atlanta, Georgia or Association of Woodworking & Furnishing Suppliers (AWFS) in Las Vegas, Nevada the council is focused on collecting trade leads and promoting the various hardwood products that companies in Pennsylvania have to offer. Having a presence at these shows helps buyers understand that Pennsylvania is home to some of the highest quality hardwoods and hardwood products in the United States. The council has also exhibited at trade shows that attract builders. These shows allow the council to connect builders with specific companies that offer the products they are looking for. Most notably, the council hosted Pennsylvania Hardwood Pavilions at the 2018 Remodeling and Deck Expo in Baltimore, Maryland and the 2019 DOMOTEX USA show in Atlanta, Georgia.



The HDC booth showcases various hardwood products, shows the differences in hardwood species, and offers samples. Some of the shows at which the council exhibits include but are not limited to the following: Architects in America (AIA), Greenbuild, GreenCon, and NeoCon East.

In recent years the council has expanded the number and type of trade shows attended. Pennsylvania forest products industry now has a very strong presence at trade shows that target architects and designers. The reasoning behind this approach is to educate and influence the ones that are specifying materials and designing the project. The council booth at these shows focuses on why choosing wood is good. Staff discuss the sustainability of wood, the health benefits, and the natural environmental choice of choosing wood. Pennsylvania is one of the only states that attends these types of shows looking to educate and inform architects and designers.



INTERNATIONAL MARKETING

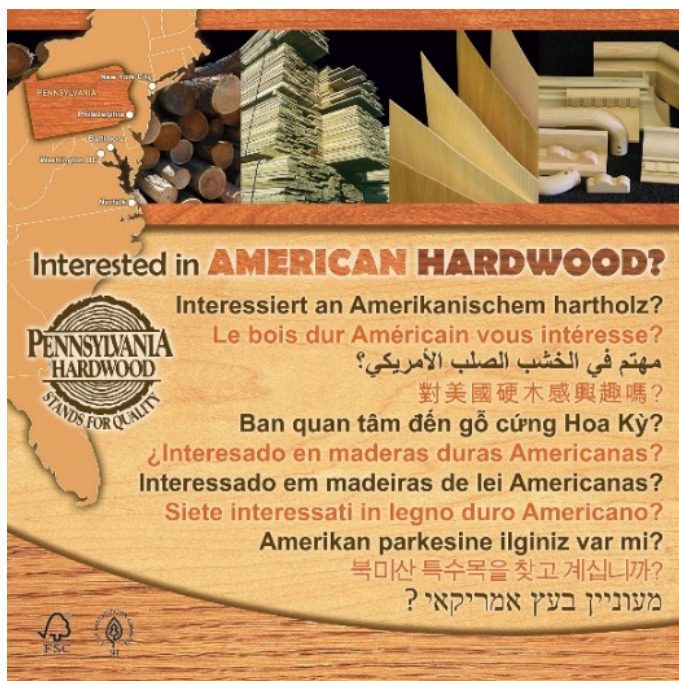
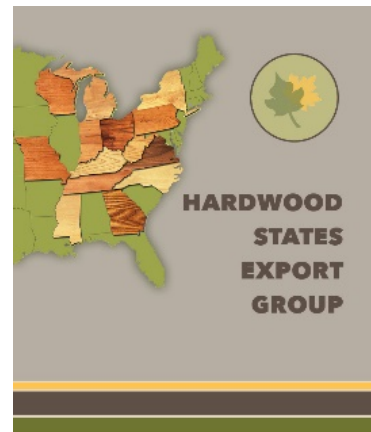


The council engages in various trade shows and activities around the world with the sole purpose of promoting Pennsylvania hardwoods. Due to the work of the council, the logo and tagline, ***Pennsylvania Hardwoods Stands for Quality***, is known worldwide. Over the last decade the council has participated in numerous trade shows in China, Canada, Mexico, United Arab Emirates, Italy, England, Germany, Vietnam, India, Brazil and Turkey. The council also hosts many international buyers to Pennsylvania and helps them to connect with suppliers of lumber, veneer, flooring and other wood products.



The council is a member of the American Hardwood Export Council (AHEC). AHEC is the leading international trade association for the U.S. hardwoods industry, representing U.S. hardwood exporters and the major U.S. hardwood product trade associations. AHEC runs a worldwide program to promote the full range of American hardwoods in over 50 export markets. The council regularly receives valuable trade leads and market reports from AHEC.

The council is also a founding member of the Hardwoods States Export Group (HSEG), an informal group of export trade specialists who have responsibility for international marketing for hardwood products in their respective states. They help secure funding through USDA – Foreign Agricultural Service in cooperation with the AHEC. The purpose of the group is to collaborate on multi-state projects that increase sales for US wood product companies through the development of international markets and opportunities on behalf of companies who are not members of AHEC. Fourteen states participate in the HSEG and currently Pennsylvania serves as the chair.



Dubai Wood Show 2018

In 2019 Pennsylvania exported \$1.12 billion in hardwood lumber, logs, furniture and paper products. Pennsylvania leads the nation in exporting hardwood lumber, is fourth in exporting hardwood logs, is eleventh in exporting furniture/furniture fixtures, and is eighteenth is exporting paper. Figure 7 shows the top 25 countries purchasing wood products from Pennsylvania in 2019.

Pennsylvania Forest Product Exports 2019

LUMBER			LOGS			FURNITURE			PAPER		
1	China	\$146,669,333	1	China	\$44,009,218	1	Canada	\$61,026,517	1	Canada	\$296,851,747
2	Canada	\$128,363,563	2	U.K.	\$10,794,174	2	Saudi Arabia	\$5,432,315	2	Mexico	\$37,559,532
3	Mexico	\$63,473,730	3	Vietnam	\$9,803,653	3	U.K.	\$5,374,229	3	Hong Kong	\$13,071,821
4	Spain	\$20,406,244	4	Canada	\$4,978,593	4	Japan	\$4,977,166	4	U.K.	\$9,945,749
5	Germany	\$10,965,448	5	Italy	\$2,304,951	5	Kuwait	\$4,361,087	5	China	\$9,617,553
6	Vietnam	\$10,927,434	6	Japan	\$1,798,203	6	China	\$4,047,976	6	Australia	\$8,823,725
7	U.K.	\$10,360,262	7	Taiwan	\$1,289,062	7	Mexico	\$3,605,191	7	Germany	\$5,985,331
8	Japan	\$5,732,952	8	Malaysia	\$1,274,028	8	Italy	\$2,449,879	8	South Korea	\$4,053,523
9	Sweden	\$5,015,519	9	Germany	\$1,212,359	9	New Zealand	\$2,431,166	9	Dom. Rep.	\$3,978,552
10	Australia	\$4,966,325	10	Indonesia	\$1,183,332	10	Germany	\$1,860,808	10	South Africa	\$3,815,156
11	Italy	\$4,437,925	11	Belgium	\$726,056	11	Qatar	\$1,696,647	11	France	\$3,288,499
12	Egypt	\$3,748,831	12	Spain	\$687,195	12	U.A.E.	\$1,376,713	12	India	\$2,789,428
13	Indonesia	\$2,896,446	13	Hong Kong	\$679,444	13	South Korea	\$1,305,877	13	Costa Rica	\$2,725,598
14	Portugal	\$2,712,784	14	Pakistan	\$436,643	14	Australia	\$1,192,372	14	Ireland	\$2,425,501
15	Pakistan	\$2,455,587	15	Turkey	\$405,730	15	Costa Rica	\$1,148,250	15	Luxembourg	\$2,389,462
16	India	\$2,224,360	16	Netherlands	\$388,595	16	Netherlands	\$999,512	16	Netherlands	\$2,359,492
17	Taiwan	\$2,086,981	17	Mexico	\$360,482	17	Bermuda	\$929,487	17	Israel	\$2,341,455
18	France	\$1,991,102	18	Chile	\$313,974	18	Bahrain	\$820,283	18	Belgium	\$2,218,169
19	Saudi Arabia	\$1,760,318	19	Bermuda	\$295,795	19	Belgium	\$660,211	19	Thailand	\$2,182,780
20	Malaysia	\$1,684,227	20	Portugal	\$292,880	20	Russia	\$630,574	20	New Zealand	\$2,066,842
21	South Korea	\$1,683,600	21	New Zealand	\$255,084	21	Ireland	\$595,312	21	Brazil	\$1,989,997
22	Thailand	\$1,611,633	22	South Africa	\$246,801	22	Chile	\$569,070	22	Chile	\$1,962,217
23	U.A.E.	\$1,525,493	23	Egypt	\$219,270	23	Dom. Rep.	\$499,013	23	Japan	\$1,858,374
24	Philippines	\$1,409,581	24	India	\$217,478	24	Singapore	\$463,230	24	Singapore	\$1,848,416
25	Lebanon	\$1,396,677	25	South Korea	\$189,265	25	Brazil	\$463,021	25	Saudi Arabia	\$1,820,605
Total PA Exports		\$463,309,942	Total PA Exports		\$85,246,110	Total PA Exports		\$117,359,041	Total PA Exports		\$449,411,202

Data Source: WISER, from US Census Bureau, Foreign Trade Division. Product Group: Wood Products: 321, Forestry Products: 113, Furniture and Fixtures: 337, and Paper: 322

Figure 7.

THE PENNSYLVANIA WOODMOBILE



The original Pennsylvania WoodMobile trailer served Pennsylvania from 2002-2014 and visited more than 715 events. In 2014 Deer Park Lumber of Tunkhannock, PA donated a new trailer to the WoodMobile program. In support of updating the WoodMobile, 61 Pennsylvania companies provided donations from flooring to technology to financial contributions. The new Pennsylvania WoodMobile was unveiled at the 99th Pennsylvania Farm Show in January 2015.

The new WoodMobile features “An Educational Walk in Penn’s Woods.” The exterior entrance door is a pathway into the healthy forests of Pennsylvania. Inside, the pathway continues with a hand-scraped quarter sawn white oak and walnut solid hardwood floor leading the visitor on a curved-trail through the display area. One side of the WoodMobile features exhibits related to forestry while the other side features displays related to the forest products industry.

The new WoodMobile incorporates more technology and interactive displays. This includes three televisions showcasing infographics and videos, and two touch screens where visitors can learn about threats to the forest, including invasive plants and insects. There is an iPad showing an infographic series on pallets, a wood products guessing game, a log with revolving wheels identifying twelve common hardwood species by leaf and wood grain, hardwood pellets visitors can feel, and various invasive insect samples and literature.



Since the unveiling of the new Pennsylvania WoodMobile the program has gained popularity across the commonwealth. Typical events include schools, festivals, fairs and summer camps. Since 2002, the Pennsylvania WoodMobile has participated in 1,162 events over the course of 2,081 days. Since its inception, the program has reached over 1.9 million visitors, including more than 220,000 student and teachers. If you are interested in scheduling the WoodMobile please contact Jon Geyer at jongeyer@pa.gov.

Due to the 2020 COVID-19 pandemic the council has created a Pennsylvania WoodMobile video series which includes four educational videos: the history of Penn's Woods told by William Penn; Forestry in Pennsylvania and what happens after a tree is harvested; an inside look at the forest products industry in Pennsylvania; and invasive insects threatening Pennsylvania's forests.

In 2020 the WoodMobile truck surpassed 200,000 miles and was regularly in need of repairs. The truck, a 2008 Chevy, was purchased for the program by PFPA and multiple contributing companies. Dwight Lewis Lumber and Lewis Lumber Products agreed to sponsor the purchase of a new WoodMobile truck. The new WoodMobile truck is a 2020 Ford. It will be used by the WoodMobile program starting the 2021 season.

Since 2010, a USDA Forest Pest Outreach grant has fully funded the operational costs of the PA WoodMobile program.

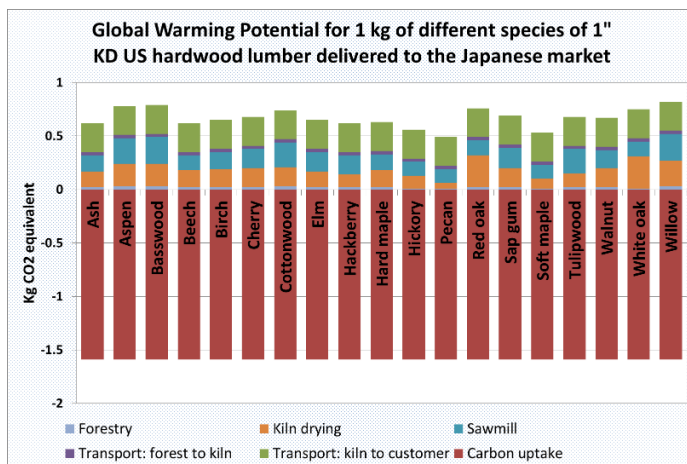


WOOD IS GREEN



With the decline of the hardwood market in the United States, the council agreed to do more to promote hardwoods as an environmentally friendly product. New scientific studies completed by neutral universities in Europe reported that hardwood is the greenest building material. These studies showed that every species of American hardwood was carbon negative even when the lumber was shipped from anywhere in the United States to Japan, one of the furthest ports. Using this information, the Council designed a one-hour continuing education course for architects and designers that has been accredited by Architects in America. This course is offered to local and regional architect gatherings in Pennsylvania.

The council also began to exhibit at many of the major sustainable building shows across the US. The Pennsylvania hardwood exhibit was designed to attract architects and designers to then have the opportunity to discuss their use of American hardwoods. The council also began to do direct marketing to consumers at Home Building Shows in Harrisburg, Pittsburgh, and Allentown. **American Hardwood: The Natural Choice** was the title of our new educational brochure and exhibit tagline. The exhibit typically features wood samples as well as a wooden bicycle and a Martin Guitar made with Pennsylvania wood.



WOOD IS GREEN

- Renewable
- Environmentally Friendly
 - Sustainable
 - Zero Waste
- Carbon Storage
- Green Energy
- Carbon Negative

Wood is the Greenest Building Material

Carbon Emissions and Storage Compared to Lumber:

	Total Process Emissions*	Emissions + Carbon Storage*
Lumber	0.033	-0.457 carbon negative
Concrete	1.1 x lumber	+0.034 carbon positive
Brick	2.6 x lumber	+0.088 carbon positive
Glass	4.6 x lumber	+0.154 carbon positive
Recycled Steel	6.6 x lumber	+0.220 carbon positive
Cement	8.0 x lumber	+0.265 carbon positive
Recycled Alum	9.4 x lumber	+0.309 carbon positive
Steel	21.0 x lumber	+0.694 carbon positive
Plastic	75.8 x lumber	+1.500 carbon positive
Aluminum	137.2 x lumber	+4.529 carbon positive

*Tons of CE/ton of product

Data Source: Dovetail Partners, Inc.

FOREST PESTS – INVASIVE SPECIES

The threats and impact of invasive species on Pennsylvania's forest has been significant in recent years. The gypsy moth severely impacted the health of Pennsylvania's oak forest over the past fifty years, and now other species are impacting Pennsylvania as a result of our global economy. The council's outreach efforts include education on various forest pests. Most of this education and outreach is done via the Pennsylvania WoodMobile and training sessions to industry and volunteers. Three of the forest pests that have wreaked havoc on Pennsylvania's forests in recent years include the emerald ash borer, hemlock woolly adelgid and spotted lanternfly.

Emerald Ash Borer (EAB)

The insect was first found in the USA in Detroit, Michigan in 2002 and in western Pennsylvania in 2007. Since then, the EAB has spread across the state and county and has been decimating the white ash tree population. White ash was one of Pennsylvania's top 10 most abundant tree species. This bug feeds on the inner bark of ash trees, thus disrupting the tree's ability to transport water and nutrients. USDA Forest Inventory Analysis data show that since 2013, when white ash volumes peaked in PA, there has been nearly a 20% decline in the tree species.



Hemlock Woolly Adelgid (HWA)

An extremely small insect that is targeting Pennsylvania's state tree - the Eastern Hemlock. This bug feeds on the sap from the underside of needles, thus interfering with the tree's ability to use nutrients, leading to needle drop, branch dieback and mortality. HWA creates a protective woolly mass on the underside of branches at the base of the needles. These masses look like tiny cotton balls. This is where the insect lives, feeds and lays eggs.

Spotted Lanternfly (SLF)

First found in Berks County Pennsylvania in 2014, this leaf hopper feeds on the sap of more than 70 valuable crops including hardwoods, hops, grapes, apples, and various other fruits and vegetables. As the SLF sucks sap it excretes a sticky substance called honeydew. This substance promotes the growth of black sooty mold that kills the understory of the forest or plants. Plants with heavy infestations may not survive.



Best Management Practices (BMPs)

Following a joint meeting with industry and the State Plant Regulatory Official, the council created SLF BMPs for the forest products industry. These BMPs explain how every step in the supply chain can help mitigate the spread of invasive forest pests such as the SLF, and it has become a model for other industry sectors. These BMPs can be found [here](#).

The **Asian Long Horned Beetle** is another threat to Pennsylvania. Thankfully this invasive insect is not currently found in the commonwealth. There have been outbreaks in Illinois, New York, New Jersey, Massachusetts, Ohio and most recently, in South Carolina. This insect threatens nearly 40% of the state's forest and must be eradicated if an outbreak is discovered. There have been successful eradications in Illinois and New Jersey, and the insect is under control and close to elimination in Massachusetts and Ohio. Major eradication efforts continue in Long Island, New York and South Carolina. If this insect is found in Pennsylvania, it is imperative that it be reported immediately to the Department of Agriculture by calling 1-866-253-7189 or emailing badbug@pa.gov.



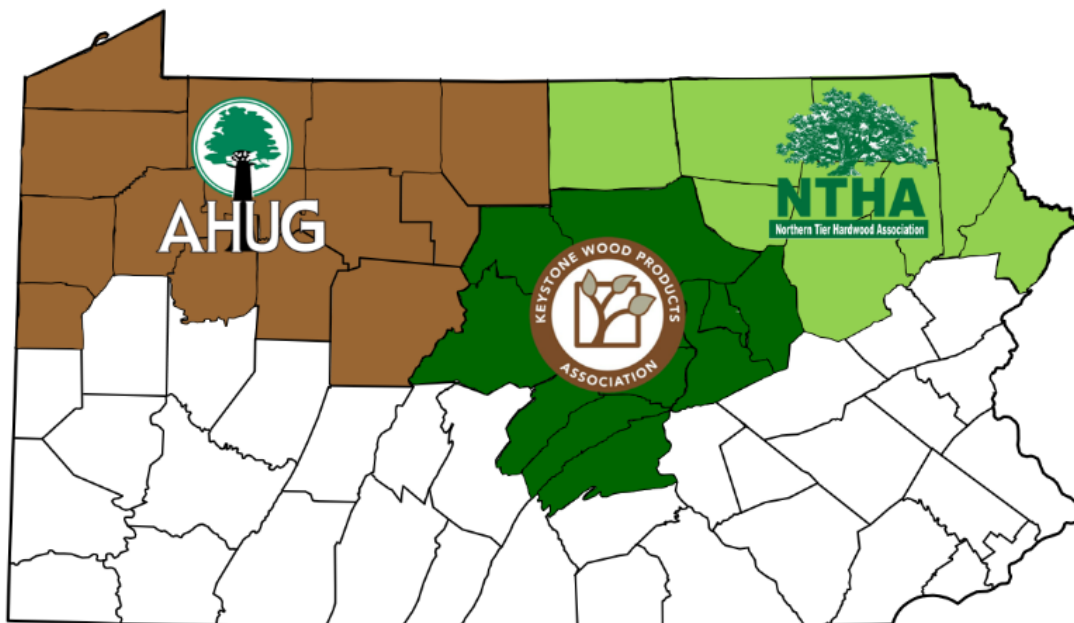
THREATS TO THE FOREST INSECTS, PLANTS, AND DISEASES



In partnership with the Northern Tier Hardwood Association the council created a booklet entitled: ***Threats to the Forest: Insects, Plants, and Diseases*** to help educate and identify forest pests and diseases. Paper copies of this booklet can be obtained by contacting the council or any of the Hardwood Utilization Groups. It can also be found online [here](#).

More information on invasive insects and plants impacting Pennsylvania's forests and agriculture can be found on the department [website](#) and at [PSU Extension](#).

PENNSYLVANIA HARDWOOD UTILIZATION GROUPS (HUGS)



The council is part of a strong network of organizations and agencies across the state that join efforts to improve the quality of our forest products industry and the quality of life for Pennsylvanians by fostering healthy forests. The council is greatly supported in its work by three regional Hardwood Utilization Groups, or HUGs, that cover more than half of the state. The HUGs receive a large portion of their annual funding through the appropriations to the Hardwoods Development Council from the commonwealth of Pennsylvania. The council and the HUGs are greatly appreciative of this support from the General Assembly. A summary of their recent work follows.



Hardwoods Development Council and HUG Staff:
Wayne Bender, Former Executive Director, HDC

Amy Shields, Executive Director, Allegheny Hardwood Utilization Group (AHUG)
Stephanie Phillips-Taggart, Marketing Coordinator, Keystone Wood Products Association (KWPA)
Sarah Hall Bagdonas, Program Manager, Northern Tier Hardwood Association (NTHA)
Jonathan Geyer, Acting Executive Director/Hardwoods Development Specialist, HDC

ALLEGHENY HARDWOOD UTILIZATION GROUP



Within the 16.6 million acres of forested landscape in Pennsylvania lies the Upper Allegheny Plateau, a region recognized worldwide for its high quality hardwoods. Allegheny Hardwood Utilization Group, or AHUG, was organized in 1985 for the purpose of advancing this exceptional natural resource asset, and for expanding the economic development and employment opportunities within the Pennsylvania forest products industry, with specific emphasis on 14 counties of the Northwest and North Central regions. From the success of this organization, the Hardwoods Development Council was formed to duplicate those efforts statewide.

Susan Swanson became the Executive Director in 1999 and retired in 2019. She served AHUG during critical years when the Allegheny National Forest completely stopped harvesting timber due to a concern for Indiana Bat habitat, and she and AHUG worked diligently to have science-based decisions made in restoring health, habitat, and production back to the ANF. Amy Shields, long time board member with nearly 30 years of experience in the state's hardwood industry became the executive director in January 2020.



Promotion of Pennsylvania's hardwood industry and sustainable management of its natural resources are fundamental components of the AHUG mission. The executive director serves on the executive team of the Real American Hardwood Promotion Coalition, a collaborative effort of over 25 hardwood associations across the country, dedicated to developing a coordinated domestic marketing and information campaign designed to effectively communicate the value, beauty and science-based benefits of real American hardwood products. AHUG participates in regional, domestic and international trade shows, and has hosted buyer visits in support of the council. AHUG produced a video, *Forest To Home*, highlighting the vitality of Pennsylvania's modern hardwood industry. AHUG also partners with the Lumber Heritage Region, the PA Wilds and many others in the development and delivery of effective working forest messaging throughout the AHUG region and beyond.

AHUG is a principle source of hardwood **education** for industry and the general public. Staff and volunteers participate in middle, high school and college career fairs and present to regional civic groups. Presentations include a video showcasing dozens of AHUG member organizations and their employees to highlight the wide variety of career opportunities available within the industry. The Project Learning Tree presentations combine industry volunteers, state agencies and the PA WoodMobile in the delivery of working forest, hardwood career and positive industry messaging to 700+ elementary students each year.



AHUG **partners with industry** to host the Kane Area Logging Safety Meeting. Now in its 52nd year and the longest running meeting of its kind in the nation, this annual gathering attracts 200 logging and forestry professionals for safety related presentations, continuing education courses and fellowship. Recognizing the significant contribution of women to Pennsylvania's hardwood industry, AHUG created and continues to host the annual "Women in Timber" luncheon. For 22 years, this event has gathered 50+ female hardwood industry professionals for an afternoon of networking and education. AHUG coordinates industry training programs, such as log bucking, First Aid and CPR and lumber grading. AHUG is also a key partner in presenting the bi-annual Roach Bauer Forestry Forum, providing important research updates and enrichment opportunities for our region's forestry professionals.



Promoting continuous improvement of the industry and its influencing factors through **representation, outreach and support** is key to advancing AHUG's mission. The executive director serves as the co-lead for the Allegheny Forest Health Collaborative, joining government and private landowners throughout the region to inform, share best practices and achieve economies of scale in addressing critical forest health issues on the Allegheny Plateau. AHUG facilitates industry participation in natural resource planning and working forest messaging and implementation. Recent examples include the DCNR Bureau of Forestry's Strategic Plan Update, State Forest Action Plan, and the US Forest Service Small Business Timber Program. AHUG hosts field tours, roundtables and other opportunities for industry to positively engage with legislators, agency officials and others in providing input into the legislative and policy processes that impact their livelihoods. AHUG has been heavily engaged in priority objectives of the Governor's Green Ribbon Task Force on Forest Products, Conservation and Jobs, including the Sales Tax Exemption on Logging Equipment, Worker's Compensation for Loggers and Working Forest Conservation Easements.

AHUG **keeps industry informed** through social media, a quarterly newsletter and by hosting an annual gathering of 150+ members and partners, headlined by high-profile speakers on timely issues of importance. AHUG serves as an important liaison between industry and economic development and workforce services. These longstanding relationships proved critically important during the efforts to assist industry in accessing the relief programs that were pivotal in their ability to endure the impacts of COVID-19. Active participation in initiatives like the PA Project Learning Tree Advisory Committee, the SFI State Implementation Committee and the Penn State Ag Advisory Board allow AHUG to positively impact the policies, research, development and innovation that shape the future of the commonwealth's forest products industry.

KEYSTONE WOOD PRODUCTS ASSOCIATION

Keystone Wood Products Association (KWPA) serves eleven counties in central Pennsylvania and impacts the region and beyond through education, workforce development and promotion efforts. As a nonprofit organization primarily funded by the Hardwoods Development Council, KWPA seeks to maintain and enhance the industry's competitive position in today's global economy. All KWPA efforts are guided by a dedicated board of industry volunteers and supported by 45 member companies and Marketing Coordinator Stephanie Phillips-Taggart.



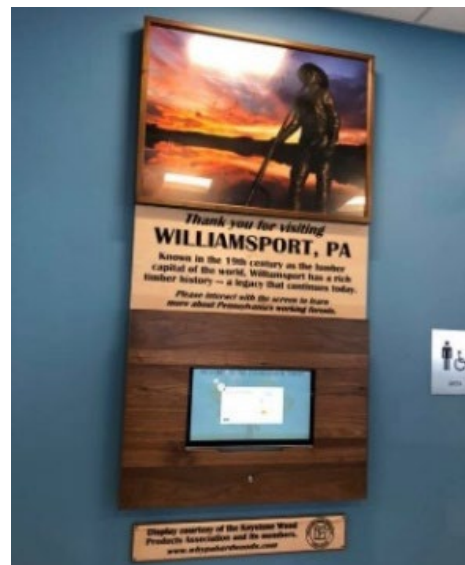
EDUCATION – School and Community Outreach:

To create awareness and foster interests in forest product careers, education is an important part of KWPA's mission. In 2017, KWPA hired Matt McGovern as their education specialist. Matt works diligently with school districts, community groups, and organizations throughout the region, providing insightful industry information either via formal presentations or career fairs. Prior to COVID-19, KWPA's education sector grew exponentially, with more and more requests. In his presentation, Matt discusses the benefits of sustainable practices, the environmental impact of forestry, and industry job opportunities. In light of COVID-19, KWPA is shifting

its focus from in-person education to online presentations and two educational videos that focus on working forests and the journey of wood products. Both videos showcase the important environmental impacts of the industry.

Public Education: In addition to classroom settings, KWPA offers public education in the form of displays and digital kiosks at Lewisburg Children's Museum, the Taber Museum, and the Lycoming County Visitors Center —reaching approximately 100,000 people a year. Offering a myriad of information such as industry fun facts, career statistics and sustainable forestry impacts, the displays are dynamic. The organization's latest project includes an interactive wall and a substantial historical-modern day comparison display at the newly constructed terminal at the Williamsport Regional Airport.

Donations/Scholarships: KWPA has financially supported major equipment purchases at area institutions, including a dry kiln at Pennsylvania College of Technology and a laser engraver at Sun Area Technical Institute. In addition, it has donated hardwood career card rack displays to local high schools. Lastly, KWPA annually awards the endowed Richard Lauchle Scholarship providing \$2,500 to a deserving student in the forest products field.



PROMOTION

To promote the industry, KWPA sponsors special events — including Williamsport Welcomes the World, Williamsport Crosscutter's Timber Night, and Gilson Summer Snow Day. It also attends events such as the PA Timber Show and supports member companies at Ag Progress Days. In addition, KWPA has a solid social media presence. Promoting the environmental aspects of wood products, KWPA reaches the public with important industry messages. As an early supporter of the Real American Hardwood Promotion Coalition, KWPA also offers consistent branding that aligns with national promotional efforts. To assist with promotional efforts, in 2018 KWPA also hired Membership and Promotion Coordinator Stephanie Phillips-Taggart.

WORKFORCE DEVELOPMENT AND INDUSTRY SUPPORT



Recognizing the importance of sustainable forestry and safety of loggers KWPA financially supports Pennsylvania's Sustainable Forestry Initiative's Game of Logging Chainsaw Safety training. In addition, KWPA actively attends job fairs and promotes member job openings to adults seeking employment. KWPA donates to ALIFT, an organization that assists loggers after an injury. KWPA also funds the council's [PA Forest Careers](#) website. In response to the pandemic, KWPA participates in industry meetings that address issues created by the global crisis.

Sharing important information regarding government programs and exploring new routes to market, KWPA works with industry organizations to support its member companies during unprecedented times.

To support the industry, KWPA has applied for and received several grants totaling over \$55,000. One of those grants, through the Pennsylvania Farm Bill's Specialty Crop Grant, will allow the council, PFPA and the HUGs to be the sponsor of the national Forever Forest children's interactive display at the Reading Museum October 3, 2020-February 7, 2021.

Through the initiatives outlined above, KWPA has been able to impact the region and state in invaluable ways. The initiatives listed above would not be possible without the support of the state's legislators and the council. In today's stressed economy, KWPA is needed more than ever.

NORTHERN TIER HARDWOOD ASSOCIATION

The Northern Tier Hardwood Association's mission is to promote long-term economic development in the Northern Tier of Pennsylvania through intelligent forest management, careful expansion of primary and secondary wood processing, improved manufacturing methods, regional hardwood promotion, and education in a nine-county region extending from Tioga County in the west all the way to the Delaware River in the east. The forest products industry has historically remained one of the region's stable and leading sources of employment and is essential to the local rural economy. The association provides critical workforce training and development, support, promotion, education, and outreach to over 140 forest products industry members and countless members of the public each year. Led by Program Manager Sarah Hall-Bagdonas, NTHA and its members have been committed to the long-term sustainability and economic viability of our regions forest resources for over 25 years.



NTHA continues to have a strong emphasis on workforce training and safety, providing approximately 15-20 Game of Logging Chainsaw Safety trainings each year. The association continues to offer numerous other important trainings and workshops that are submitted to Pennsylvania's Sustainable Forestry Initiative (SFI) for Continuing Education credits so that the workforce is SFI Qualified. NTHA works with numerous agencies, organizations, government and academia to maximize the outreach and benefit to the industry and the public.

As the Spotted Lanternfly spreads and the quarantine expands, the NTHA continues to focus their attention on combating the spread of the Spotted Lanternfly and educating industry members and the public about this invasive insect. The association has provided education and outreach on this destructive pest for over 850 people and plan to continue this effort in the coming years. NTHA has also partnered with the DCNR to develop a "Threats to the Forest" presentation that has been and will continue to be presented throughout the state. Due to the success of this presentation and program, NTHA partnered with the Hardwoods Development Council to develop and publish *Threats to the Forest* an informational booklet to be mass distributed throughout the commonwealth and made available [online](#).



The education of children to adults on the importance of well-managed, working forests and the sustainability of forest products continues to be a challenge – both to the success of the forest product industry and the state of the workforce. The association is proud to provide K-12 education and career resources to hundreds of students each year and are excited to have reinvigorated our grant program for schools, organizations, and businesses throughout the region. Two scholarships for high school and college students pursuing a degree in forestry are awarded each year.

The Association is a proud Pennsylvania Hardwoods Development Council member and supportive of all council activities, committees, domestic and international trade shows, FFA Forestry Tour, Farm Show, and WoodMobile events. We provide input on important committees such as the Township Ordinance Committee and the Erosion and Sedimentation Control Committee, and have assisted in the publication of several important documents such as the [Forest Management and Timber Harvesting in Pennsylvania](#) resource, revising DEP's *Timber Harvest Operations Field Guide for Waterways, Wetlands, and Erosion Control*, and the [Spotted Lanternfly Best Management Practices for the Forest Product Industry and Landowners](#).



NTHA serves as a liaison between the region's wood industry and its local, county, state, and federal officials to improve their awareness of the importance of access to public timber resources and other current issues facing the forest products industry. NTHA is also excited to be a co-sponsor and member of the Real American Hardwood Promotion Coalition designed to promote U.S. hardwoods and improve the domestic market.

NTHA is proud to provide these services and support each year – and the Association's efforts and support will be particularly important as the industry faces difficult challenges in the years ahead.

2019 PENNSYLVANIA FARM BILL HARDWOOD SPECIALTY CROP GRANTS:

The new Pennsylvania Farm Bill for 2019/20 provided for the first-time funds to specialty crops that are not part of the USDA federal grant program – this includes hardwoods. In 2016, the USDA program provided \$50,000 for a maple syrup marketing study, but no other segment of the forest products industry was eligible for these funds. The new Farm Bill allowed hemp, hardwood, hops and honey to apply for funds. The following hardwood projects were funded:



- **Sustainable Forestry Initiative** received \$25,000 for **Logger Training Support** to underwrite their annual budget due to anticipated shortfall from hardwood company members whose contributions are based on production. With 20-40% reduction in production due to the US-China trade war, a program ending deficit is averted.
- **AHUG** on behalf of the Allegheny Forest Health Collaborative received \$25,102 for a study on “Examining the Extent, Severity and Potential Causes of Increased **Birch Regeneration.**”
- **KWPA** received \$12,500 for the “**Forever Forest Exhibit**” at the Reading Public Museum on behalf of the HDC, the three HUGs, and the PA Forest Products Association to jointly sponsor this nationally recognized forest products display in a region of the state where understanding the impact of the forest products industry is important. This exhibit will be on display from October 3, 2020 through February 7, 2021.
- **KWPA** received \$20,000 to develop a new **Consumer Marketing Display** for the Wood Products Industry that will use the new marketing strategy and promotion results from the Real American Hardwood Promotion Coalition study and campaign.
- **NTHA** received \$10,000 to develop and print an informational booklet on ***What Will My Forests Look Like*** that will promote sustainable forestry and be a pictorial guide for forest landowners who are considering different forest management options for their forest.

Forever Forest Exhibit – Reading Public Museum **October 3 through February 7, 2021**

The exhibit teaches children and adults how their everyday lives are connected to forests, through the ways they live, work, and play. *Forever Forest* includes areas focused on forest life and sustainable harvesting; lumber transportation; and products made from wood. Exhibit pieces include a treetop climber with slide; a kid-size replica of a train engine and railcar to show how products move across the country; mini grapple skidders; a pretend sawmill; microscopes; and a miniature home under construction in which children can help finish by adding siding, molding and other details.



ECONOMIC DEVELOPMENT OF THE INDUSTRY BY THE COUNCIL

The resiliency of the forest products industry in Pennsylvania is astounding. Early in this millennium, the industry had to expand its export markets beyond Canada and Europe and reach new furniture manufacturers in China and Pacific Rim nations. The Hardwoods Development Council was critical during that time as they worked in partnership with the [Regional Export Network](#) and the International Trade offices with the Department of Community and Economic Resources.

During the Great Recession, it was the sale of state and federal timber that kept many sawmills in operation when private forestland owners decided to delay timber harvests for better prices. The council's commitment to sustainable forestry education in partnership with the regional hardwood utilization groups and the Pennsylvania Forest Products Association helped to regain funding and the Council survived drastic budget cuts.

During the exponential growth of fracking for natural gas in northern and western Pennsylvania, the industry lost loggers, truck drivers and mill workers to better paying jobs, only to have them return when those higher paying jobs ended. During those years, the Council focused on logger training and forest careers and created the website portal for careers: www.paforestcareers.org



During the downturn in the industry due to the China trade wars, the Council offered trade show opportunities in new and emerging markets such as Dubai, India, Turkey, and Brazil, and started promoting the United States as the new opportunity for expanded sales. The Council was the first state to promote hardwoods at the “green” national trade shows. The messaging focused on **American Hardwood – The Natural Choice** as the greenest building material.

When the global coronavirus pandemic hit and closed the state's forest products industry overnight, it was the work of the council that got 90% of the industry back up and running to provide the critical and life sustaining resources that were needed for America's paper industry and the support products such as pallets to move food, medical supplies and other critical commodities.

The council continues the significant role that the Pennsylvania Legislature intended when it created the council in 1988. The Legislature also recognized the emerging needs of the industry and in 2020 amended the membership of the Council from 25 to 29 members. Pending final approval by the Senate and the Governor, the Council will expand to include the Secretary of Education and provide a permanent position on the Council for the Allegheny Hardwood Utilization Group which provided the vision to create the Council. Additional members of the Council will include a logger and a forester, and the furniture manufacturer representative may now also be a kitchen cabinet manufacturer.

The council has several initiatives underway that will move the forest products industry forward. The council has worked to develop a proposal for the performance of a state-wide values/supply study that will be timely in a post-pandemic recovery. The study will be conducted with economic development funding through the hardwood utilization groups. The year-long study will be a comprehensive state-wide assessment of the strengths, weaknesses and opportunities for economic

growth that exist within all sectors of Pennsylvania's forest products industry - from forest landowner, forester and logger to sawmiller, secondary wood product manufacturer and beyond.

The council is also one of 27 national, state and regional hardwood associations that are part of the Real American Hardwood Promotion campaign, which was created to increase domestic markets for hardwood product sales in the US, enhance the perception of hardwood's value, generate new products and improve industry stability and profitability. The Coalition conducted research, surveying numerous target audiences – including architects, contractors, home renovators (consumers), designers, millennials, and GenXers – about their perceptions of hardwood attributes, those of competing products, and what is most influential in driving consumer purchasing decisions. Research showed that consumers recognize American hardwood as the “gold standard” for their furniture, flooring, and cabinets but often choose alternatives based on price or perceived attributes of those materials. Other key findings showed that consumers are not being introduced to hardwood products early enough or often enough in their project planning and decision-making journey, and that while hardwood products are perceived as “healthier for the home” as compared to alternatives, sustainability and environmental messaging does not play an impactful role in persuading consumer purchases of hardwoods. The coalition will soon launch the “Real American Hardwood” brand, which will include a logo, targeted messaging strategies and a 3-year implementation plan to coalesce the industry around this effort, and to impact consumers using influencers, social media, increased Big Box Store presence and other promotional concepts. To learn more, visit www.realamericanhardwood.com.



The council leads an inter-agency dialogue with leadership at the Allegheny National Forest (ANF) with the state's Departments of Agriculture, Conservation and Natural Resources, Community and Economic Development, and the Pennsylvania Game Commission. This dialogue focuses on issues supporting forest management and forest health issues on the ANF with the aim to provide more forest resource for sale to provide more income to the local schools and municipalities for payments in lieu of taxes. The success of the first timber sale this fall coordinated by the Good Neighbor Agreement between DCNR and the ANF shows the benefits of state agencies working together with the Allegheny Forest leadership. An estimated 500,000 additional board feet will be harvested on the ANF.

Due to having to cancel the 2020 WoodMobile program because of the global pandemic, the Pennsylvania WoodMobile is going virtual. The council is creating a four-part educational video series that can be used by students and teachers in lieu of a visit from the WoodMobile. The entertaining “William Penn” presentation on the forest history and importance to the state is performed by Van Wagner, a professional teacher, songwriter, and historical actor. Jon Geyer, Hardwoods Development Specialist with the Council is featured on three additional videos that focus on Pennsylvania's forest resource, invasive forest insects, and the forest products industry.

Pennsylvania is blessed with a valuable forest resource and a strong commitment by its Governor, agencies, organizations, and most importantly, its citizens to work together for the common good of the forest and the vital forest products industry. The Hardwoods Development Council has strong leadership that will guide the council and industry through the impacts of the global pandemic. The resiliency and tenacity of those “who have sawdust in their veins” will bring a bright future for the industry that gives Pennsylvania its name – Penn's Woods.

PENNSYLVANIA FOREST PRODUCTS ASSOCIATION



The mission of the Pennsylvania Forest Products Association is to promote the interests of the forest products industry within Pennsylvania by creating a regulatory environment in the state that enhances the profitability of the entire forest products industry; creating within the general public knowledge and appreciation for the value of the industry and its contributions to forest sustainability; and informing industry members about legislation and regulatory issues, technical matters and activities within the industry.

PFPA is the recognized and respected voice of the industry in Harrisburg. The association monitors the state regulatory environment and represents the industry on more than a dozen formal committees and advisory groups in DCNR, PennDOT and the Department of Agriculture. PFPA advocates not only on behalf of its members but also for other nonprofits, like the hardwood utilization groups, that serve the industry throughout the state.

PFPA is the administrative host of the PA Sustainable Forestry Association State Implementation Committee, which has provided Professional Timber Harvester Training to over 7,000 individuals since its inception in 1985.

PFPA partners with the Department of Agriculture to operate the Pennsylvania WoodMobile for the citizens of the state. The program started with the help of PFPA members in 2002 and since then the WoodMobile has delivered educational programming to more than 210,000 students and teachers and has hosted more than 1.9 million visitors. In 2008 PFPA replaced the original truck and in 2015 initiated a capital campaign to fund the new exhibits in the WoodMobile.

PFPA and the Hardwoods Development Council have worked together on countless initiatives over the years, from promoting Pennsylvania hardwoods to fighting invasive species that threaten the entire industry. The close working relationship between PFPA, the HDC, the Hardwood Utilization Groups and the PA SFI, has created a coalition with the dedication to tackle difficult issues such as workers compensation for loggers, finding and training the next generation of loggers, and seeking dedicated funding to fight the ever-increasing number of invasive species.

The council pays special tribute to the memory of Paul Lyskava, executive director of PFPA from 2004-2017. He previously served as executive director of the Hardwoods Development Council from 1998-2004. It was under Paul's leadership that the dream of the PA WoodMobile began in 1999 and became a reality in 2002. His fundraising efforts from industry provided a new WoodMobile truck in 2008 and over \$120,000 for the second WoodMobile in 2015. His professional and visionary leadership has been greatly appreciated not only by industry but also the Department of Agriculture and the council.





PFPA Board doing legislative visits in Harrisburg.

Timber Show 2019 Chair Brent Forcey with Parade Grand Marshal Representative Matt Gabler.



PFPA Members raised \$17,850 for Pennsylvania Children's Hospital with Log A Load fundraiser

PENNSYLVANIA SUSTAINABLE FORESTRY INITIATIVE IMPLEMENTATION COMMITTEE

For 25 years the Sustainable Forestry Initiative (SFI) has been a leader in forest sustainability through its accredited certification standards. These standards have expanded responsible forest management across North America and provide consumers around the globe with assurance that the SFI-certified products they purchase contribute positively to the long-term health of people and the planet.

The Pennsylvania SFI Implementation Committee (PA SIC) was organized in 1995 and operates as one of the 34 SICs spread across North America forming a unique grassroots network at the heart of the SFI program. The implementation committees are local collaborations between SFI-certified organizations and a diverse array of forest sector stakeholders that advance SFI and sustainability through forest-focused collaborations. The PA SIC works hard to support sustainable forestry in Pennsylvania by promoting SFI forest certification, training and developing the logger workforce, educating the public about the value of working forests, and assisting with regulatory issues.



Chuck Coup has served as the organization's program manager since 2012 and has provided critical leadership on major council initiatives, such as addressing illegal municipal ordinances and updating DEP's erosion and sediment control regulatory documents.

Training and Developing the Logger Workforce

The PA SIC operates the PA SFI Professional Timber Harvester Training Program, the only statewide training program geared towards Pennsylvania's commercial logging workforce. Emphasizing safety, professionalism, conservation, forest stewardship and regulatory compliance, the program is widely recognized and well respected within Pennsylvania's forest products industry. To date, more than 7,000 individuals have participated. This training is required by SFI certified organizations, many sawmills across the state, and for commercial harvests on Pennsylvania's DCNR forest lands.

Educating the Public About the Value of Working Forests

The PA SIC serves as an informational resource for the state's more than 740,000 private landowners who control almost 70% (11.5 million acres) of the state's forest landscape. The individual management decisions of these landowners collectively influence the health of our forests and the sustainability of our wood fiber supply. The Pennsylvania SIC website provides access to some of the best forest stewardship resources available online, all conveniently organized in one place at sfiofpa.org. The Pennsylvania SIC also supports and participates in forest landowner and public outreach programs pertaining to sustainable forestry and forest products supply.



Assisting with Regulatory Issues

Over the last few years, the PA SIC has led successful efforts to update discontinued DEP documents that are critical for timber harvesters to understand and comply with Pennsylvania's environmental regulations. This includes DEP's template Erosion and Sedimentation Control Plan for Timber Harvesting Operations and the *Timber Harvest Operations Field Guide for Waterways, Wetlands and Erosion Control*. The PA SIC has also worked with DEP to reevaluate waterways listed as being impaired by logging operations on their biennial Integrated Water Quality Monitoring Assessment Report. These efforts contributed to a 61% reduction in such stream miles from their 2016 to 2018 reports.

Lastly, the PA SIC has helped inform Pennsylvania's forest products industry and state and local regulatory authorities about problematic municipal ordinances related to timber harvesting. Our fact sheet on Act 38, or ACRE- Agriculture, Communities and Rural Environment, available on our [website](#), provides foresters, loggers, landowners and others in Pennsylvania's forest products industry with the information they need to directly address unlawful forestry and timber-harvesting ordinances with their local municipalities.

PENNSYLVANIA GAME COMMISSION

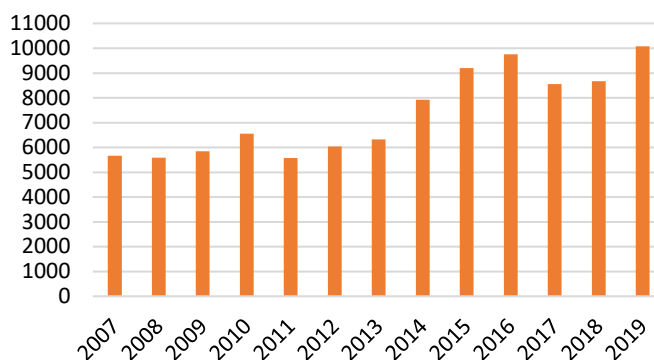


As the second largest single owner of forestland in Pennsylvania, the Pennsylvania Game Commission's forestry program is dedicated to managing its State Game Lands for the greatest benefit to wildlife, while maintaining the long-term sustainability and health of the forest. To accomplish these goals, it is essential that Pennsylvania's forest products industry remain healthy and sustainable as well. This requires a relationship between the industry and the commission that works as a partnership in which we understand each other's needs and work to achieve shared goals.

In recent years the commission has invested in its forestry program in both technology and manpower. The first comprehensive inventory of our forest habitats was started in 2006 and is now part of a Geographic Information System, or GIS, that has provided valuable information about the condition and trajectory of our State Game Lands. In analyzing this information, we have moved forward with new goals in order to better balance our forest age classes and address the significant forest health issues we face. The commission's forestry program has demonstrated this commitment by continually increasing our outputs of timber offered for sale, nearly doubling our acres impacted when comparing 2007 to 2019.

In the spring of 2020, the onset of COVID-19 created tremendous change and immediate impacts to our industry. The commission quickly adapted and continued offering timber sales with almost no interruption. Additionally, the commission continues to work with our industry partners to extend contracts, reassign contracts, and modify timelines where possible. The commission will continue its pragmatic approach to managing contracts to ensure completion of planned forest habitat improvements.

PA GAME COMMISSION TIMBER OFFERED for SALE



Another area that continues to require vigilance by all those concerned with forest health and sustainability is white tailed deer management. Numerous changes in the past decade have seen deer populations brought into balance with their habitats in some areas while still posing regeneration challenges in others. The Deer Management Assistance Program (DMAP) program allows forest landowners opportunities to better manage local deer populations to achieve their goals. At the same time, Chronic Wasting Disease (CWD) has presented a new set of challenges in deer management, affecting both the deer and hunters, with new rules and goals in management. The voice of the forestry industry remains important as the commission continues to manage deer to produce healthy habitat, healthy deer, and acceptable deer-human conflicts all while providing recreational opportunities.

The commission looks forward to the future in partnership with the forest products industry so that we can achieve our goals of healthy forest habitats that support healthy wildlife populations for current and future generations.

ALLEGHENY FOREST HEALTH COLLABORATIVE



AFHC

**Allegheny
Forest Health
Collaborative**

Forests have long been affected by humans, insects, disease and invasive plants. But by late 2016, it was apparent that the region surrounding the Allegheny National Forest had become a “perfect storm” of forest health challenges. Emerald ash borer, hemlock wooly adelgid, fall webworm, cherry scallop shell, gypsy moth, beech bark disease, glossy buckthorn – all had invaded the Unglaciaded Allegheny Plateau region in the past decade, leaving all landowners in the region struggling to adapt their management strategies. What did these challenges mean to the people who lived, played and derived their livelihood from the forests in this region? What conservation and biodiversity values were being threatened?

Officials on the Allegheny National Forest (ANF) recognized that their best hope for addressing these challenges would be in tapping into the imagination, commitment, local knowledge and science resources available to them, without regard to the ownership boundaries of specific forest lands. With this vision in mind, the ANF engaged nationally-recognized experts to assist in developing a collaborative approach to addressing forest health challenges across boundaries. As a result, more than 70 individuals from government agencies at the local, state and federal level, the forest products and oil, gas, and mineral industries, recreational user groups, conservation organizations and concerned citizens set out to identify and prioritize the greatest forest health threats facing the region. These include age class imbalance, loss of ash and hemlock, black cherry health and sustainability, lack of species diversity, non-native insects, plants and diseases and safety and aesthetics along corridors.



Over the last three years, the collaborative has created a shared leadership structure, developed a treatment priority index and established active working groups on research, silviculture, noninvasive plants, monitoring and communications. They have organized annual spring planning meetings to provide opportunities for landowners throughout the region to share best practices and achieve economies of scale in their management efforts. They have worked to address forest health issues by implementing innovative techniques such as the Good Neighbor Authority, a partnership between the USDA Forest Service and the Pennsylvania Department of Conservation & Natural Resources Bureau of Forestry, a newly-approved weight-scale authority for increased utilization of low-value biomass, and the streamlining of planning efforts. The group has also hosted several legislative field days, providing opportunities for elected and appointed officials to hear from agency and industry landowners and to witness the positive benefits of this shared approach to addressing forest health concerns throughout the region.

The Allegheny Hardwood Utilization Group (AHUG) serves as co-lead for the collaborative alongside the ANF and is also co-chair of the group's Communications Committee alongside DCNR's Bureau of Forestry. The Hardwoods Development Council, along with the Departments of Agriculture, Conservation & Natural Resources and the PA Game Commission have been involved in this effort since its inception. Under direction of the HDC, a bi-monthly dialogue now occurs between members of the AFHC and state officials, providing opportunity for all parties to update the group on upcoming management activities, educational opportunities, special programs and other items of importance.

Only through shared knowledge and experiences can we address forest health issues across ownerships and landscapes. The Allegheny Forest Health Collaborative is poised to be a key player in achieving the successful long-term sustainability of the forests of the Allegheny Plateau.

PENNSYLVANIA MAPLE SYRUP PRODUCTION

Pennsylvania is the nation's fourth largest maple producer and has enough maple trees to rival Vermont, the nation's largest producer. But still consumers often choose lesser quality syrups that are artificially flavored or the heavily-marketed Vermont syrup. PA Preferred® branding, available free to producers, helps consumers to buy local from Pennsylvania suppliers.



The Pennsylvania Maple Producers Council reports that they have 237 members from six regional maple producer associations plus hundreds of other maple producers throughout the state. The regional groups are:

- Endless Mountain Maple Syrup Producers (23 producers in Bradford, Sullivan, Susquehanna and Wyoming County)
- Northeastern Maple Syrup Producers (27 producers in Carbon, Lackawanna, Luzerne, Monroe, Pike and Wayne County)
- Northwest PA Maple Syrup Producers (65 in Erie, Crawford and Warren County)
- Potter-Tioga Maple Producers (41 producers in Potter and Tioga County)
- Somerset County Maple Producers (75 producers in Somerset County)
- River Valley Maple Producers (6 producers in the Susquehanna Valley from Harrisburg to Lewisburg)



Maple syrup production has certainly modernized over the years, with evaporators and large collection systems using vacuum tubing. It takes roughly 40 gallons of sugar maple sap to produce one gallon of high-quality syrup, and roughly 60 gallons of red maple sap to produce one gallon. Sugar maple and red maple make up 22.8% of Pennsylvania's forest. Typically, maples only grow in the Great Lake state regions and southeastern Canada.

In 2016, the Department of Agriculture's Pennsylvania Specialty Crop grant funded market research on behalf of the state maple syrup industry. One popular misconception is that maple syrup is higher in calories, when in fact it has less calories than high fructose corn syrup. In addition to high quality syrup, some producers also offer maple cream, maple sugar and maple candy.



Production is always dependent upon weather conditions in the state from February through March. Warm sunny days and freezing nights are ideal for highest volume of production. More information on Pennsylvania maple syrup can be found [here](#).

LUMBER HERITAGE REGION



The Lumber Heritage Region (LHR) is a 15- county region in North West and North Central Pennsylvania that accentuates the importance of the lumber industry of the past, present and future. The goal of the LHR is to market its assets to potential visitors, to serve as a resource for the PA hardwood industry, and to highlight the significant economic impact the lumber industry has, not only for the state, but the entire country.

The LHR gets most of its funding from the Heritage and Other Parks line item in the state budget. Each heritage area is guaranteed \$120,00 dollars to operate annually. The remaining annual project funding comes from DCNR Partnership grants. These are grants all heritage areas must compete for to fund projects. The LHR has been very successful in securing funding for numerous projects throughout the region. Since 2001, LHR has been able to leverage more than three million dollars in project funding. Our projects have helped build the economy in this region, increased tourism and vastly strengthened our ability to partner with other organizations.



We work hard to develop projects that benefit other organizations as well as LHR. We understand the importance of partnerships and know that our strength comes from helping others succeed. Our newest project is a unique collaboration that is intended to encourage visitors to move fluidly throughout the region by creating an attraction they will be excited to visit. The LHR Wayfinding Signage project placed beautifully designed “wayfinding” signs throughout the region in numerous locations. Wayfinding signs encourage visitors to check out another location we think they should see. These signs have proven to be successful and we intend on developing them further.

We are currently working on a similarly unique project that will highlight the diversity of the lumber industry. We feel it is important to tell the stories of the men and women from the lumber industry’s history. These include stories of women who kept lumber camps going by working tirelessly to feed hungry groups of men when they returned from a hard day working in the forest and of the diverse group of men who came from all walks of life, each with their own unique set of skills that contributed to the evolution of the industry. This information will help us develop additional projects meant to excite and attract visitors to learn more about LHR.

The Pennsylvania Hardwoods Development Council has served as stakeholder in the development of the LHR and continues to serve as an important partner. The LHR has partnered in educational opportunities by using the WoodMobile and sharing presentations about the importance of the industry. Each year LHR staff members volunteer at the hardwoods exhibit at the PA Farm Show.

Supporting the industry as we celebrate its heritage is foremost in our mission at the Lumber Heritage Region. We will continue to promote the Pennsylvania hardwoods and make it a priority in our projects, marketing efforts and educational presentations. The LHR is determined to tell all the stories of the industry: past, present and future.

PENN STATE FOREST AND FORESTRY RELATED PROGRAMS

The council has also developed strong relationships with the Pennsylvania State University, particularly the [Penn State College of Agricultural Sciences](#), and its many resources that promote and support forestry and the forest products industry. As the sole land-grant university in Pennsylvania, the college focuses on a tripartite mission of teaching, research and outreach. A national leader in forest and forest products education, Penn State has done much research to support the industry over the years. The head of the Department of Ecosystem Science and Management (ESM) is a member of the council and provides a link to a dedicated faculty and staff who often report on recent and groundbreaking research to the council.

Although the council primarily interacts through ESM, other departments such as entomology, plant science, plant pathology and microbiology, and ag economics, sociology and education contribute expertise and research that benefits forestry. An example of this was in February 2020, when Professors Dr. Mark Gannon and Dr. Kelli Hoover reported on their research using radio frequency technology to combat invasive species. Penn State has a patent on research using a dielectric heat treatment chamber, which could reduce or eliminate the use of methyl bromide as a fumigant to treat logs and lumber for export. PhilaPort is currently in discussion about the use of this technology for the treatment of dunnage.

Penn State, University Park

[Department of Ecosystem & Science Management](#)

The historic College of Agricultural Sciences School of Forest Resources was renamed the Department of Ecosystem Science and Management in 2011, as part of an overall restructuring in the college. The program offers [three undergraduate majors](#): Forest Ecosystem Management major, with options in Community and Urban Forest Management, Forest Biology, Forest Management (accredited by the Society of American Foresters) and Watershed Management; Wildlife and Fisheries Science major, with



options in fisheries or wildlife; and Soil Science Option-Environmental Resource Management Major. The college has 8,000 acres of forestland used for teaching, research, recreation and as a renewable resource for timber and other forest products. A new Forest Resources Building was built at University Park in 2006, and the forest products industry gave over \$1 million in value of hardwood lumber, mouldings and dimension, which was integrated into the design features of what is now considered one of the most beautiful buildings on campus.

The Department of ESM is also the home for the [Center for Private Forests](#). The Center for Private Forests focuses on applied research, education, and outreach to students, forest landowners, the forest-products industry, loggers, conservation districts, agencies, land trusts, non-governmental organizations, and the public.

[ESM research](#) areas include forest health and management, ecosystem restoration, watersheds, molecular genetics, wildlife, root ecology, geospatial information systems, soil characterization and health, and a host of other topics.

Department of Agriculture and Biological Engineering

The historic wood products major in the School of Forest Resources had declined in enrollment, and during the college restructuring in 2011, that major was moved into the university's Department of Agriculture and Biological Engineering and reorganized into a [BioRenewable Systems Major](#). The major is a hands-on education in the technology, materials, best practices, and systems of the explosive-growth worlds of biorenewables and agricultural industries. The major has two options. The Ag Systems Management Option focuses on the science, technology, and business of agricultural production. Graduates of this option apply their technology and management training to the diverse areas of food and fiber production. The Bioproducts Option focuses on the science, business, and engineering technology that leads to the development of new bio-based products. Career tracks are broad, ranging from traditional forest products companies to emerging sectors, including bioenergy coproducts. Enrollment in these majors has been strong to date.

Penn State Extension – Forest Management

Penn State Extension's [Forestry and Wildlife Program](#)

team of experts provides research-based education and assistance on forest management, forest products, forestry business and economics, and wildlife for broad audiences from landowners to industry and management professionals. Currently, the team of experts consists of five full-time, county-based educators distributed across the state as well as a number of specialists based in University Park, who provide expertise in vegetation management, private forest landowner issues, wood industry education and training, wildland fire, ecosystem services, forest taxation, timber markets, wildlife and youth education. The team educates and informs through fact sheets, publications, workshops, conferences, videos, online courses, and webinars. Engagement with research, demonstration sites and partnerships with an extensive network of stakeholders help form the basis of information, instruction and recommendations. Extension also has extensive programs in insects, pests and diseases; water quality; energy; business and operations; and community development.



Extension has a long history of partnering with industry through educational programs and technical trainings for professionals including the SILVAH program and community of practice, SFI trainings, lumber grading and dry kiln workshops, an annual Forest Health Briefing, the Roach-Bauer Forestry Forum, and several collaborative working groups involving industry. Through these and other activities, Extension offers numerous professional development, continuing education, and professional recertification credit opportunities (including PA Pesticide Recertification, Society of American Foresters, International Society of Arboriculture, Sustainable Forestry Initiative, and others) for industry professionals. Extension is currently working with wood products and processing stakeholder groups in

Pennsylvania to develop new opportunities in direct response to industry- and partner-identified training needs, targeting wide-reaching online course development.

[Penn State Mont Alto - Forest Technology](#)

Penn State Mont Alto offers 2-year associate degrees in Forest Technology and Wildlife Technology, which prepares students for careers in forestry and natural resource management careers. Mont Alto also hosts a [Forestry Club](#) where students participate in local and regional forestry meetings and the Society of American Foresters National Convention. Volunteer work is important and students plant trees, help build trout habitat improvement stream structures, build trails, and maintain wildlife habitat openings. The Woodsmen Team, a Penn State club sport, demonstrates and competes in old-time logging events, cross-cut sawing, chopping, pole climbing, to name a few, and participates in the annual Farm Show.



[Penn State DuBois – Wildlife Technology](#)

A 2-year Wildlife Technology program educates students in the techniques of wildlife management preparing them for careers in applied phases of natural resource management, wildlife biology, range management, and the care, maintenance and propagation of animals.

Pennsylvania College of Technology (Penn State Affiliate), Williamsport

[Forest Technology Program](#)

The Pennsylvania College of Technology offers an AAS degree in Forest Technology. The program is accredited by the Society of American Foresters and has an 8,000ft² sawmill with a dehumidification kiln and 750 acres of outdoor laboratory space. Hands-on training is emphasized, and students become proficient in jobs ranging from timber inventory, tree-felling, operating the head saw, to drying. The kiln was made possible through generous donations from industry and individuals who are invested in our students, and ultimately the future of our industry. The landholdings of the college provide our students with approximately 750 acres of outdoor laboratory space. The forestry program also offers our students the ability to work on a multitude of different land holdings including DCNR, the PA Game Commission and private landowners. The program is focused on providing a quality education that will change with the industry needs and focus on areas of innovation and technology related to our industry as it moves forward in the future.



