SUSTAINING PENNSYLVANIA’S HARDWOODS INDUSTRY:

AN ACTION PLAN

PENNSYLVANIA HARDWOODS DEVELOPMENT COUNCIL

PENNSYLVANIA DEPARTMENT OF AGRICULTURE

HARRISBURG

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EXECUTIVE SUMMARY

The wood and forest based industries in Pennsylvania are diverse and have a very significant economic impact. Products range from paper used in best selling novels to pallets carrying supplies to our troops overseas; veneer used in fine furniture to custom cabinetry built into homes. More than 80,000 Pennsylvanians have been employed directly by forest products industries, and hundreds of thousands of our citizens benefit as owners of timberlands. Pennsylvania is the nation’s leading hardwood producing state. Not only do we grow some of the finest hardwood timber in the world, but we also are the number one producer of hardwood lumber.

Pennsylvania leads the nation in the growing volume of hardwood species, with 17 million acres in forest land. We have been the leading producer of hardwood lumber in the United States, with production of over 1.1 billion board feet in 2006. A 2005-2007 study done at Penn State (Strauss, Lord et al. 2007) and sponsored by the Hardwoods Development Council concluded that the industry had reached $17 billion in annual sales, with an economic impact of over $26 billion. The economic impact of the forest industry is particularly significant across rural Pennsylvania. This activity generated nearly $5 billion in annual wages among 128,000 employees (82,000 jobs in logging, sawmilling and secondary wood and paper manufacturing; remainder in transportation and other services). The study concluded that for every additional million board feet of sawtimber supplied to Pennsylvania sawmills, an additional $10 million of industrial output would be realized and 71 new jobs created.

The Pennsylvania Bureau of Forestry and the Pennsylvania Game Commission generated approximately $39 million and $15 million respectively in timber sales revenue for the state in 2006; and have generated $463 million in the past ten years. Pennsylvania’s private forest landowners take in an estimated $300 million per year from the sales of standing timber.

The industry, however, is in severe trouble as a result of the current US recession. Demand for wood products of all kinds is only half of that in recent years. We have seen many small and medium sized sawmills close and larger mills reduce their production. Overall lumber production is down to about 500 million board feet, which is much less than half of capacity. Evidence suggests that hundreds of loggers have left the business in recent years. As conditions persist or deteriorate further over the next year, we will see many more loggers and small sawmills disappear. A number of additional large sawmills will also close, perhaps permanently. Current employment is about 62,000 people. The effects of this recession are likely to alter the face of the hardwoods industry in Pennsylvania, which will in turn exacerbate the declining economic conditions in much of rural Pennsylvania. Recently, state funding to support the Hardwoods Development Council’s efforts to assist the industry has been cut.
The impacts of a smaller hardwoods industry are substantial, and highlight the reasons why the Commonwealth must take actions to ensure its health:

**Direct Economic Impact:** The long term contraction of the industry by a third or more of its production would mean no return of the more than 20,000 well-paying jobs that have already been lost, and the loss of $8-13 billion annual economic impact to the Commonwealth. Additionally, tens if not hundreds of millions of dollars in state revenues from timber sales will be lost if the industry does not recover from its current state. Declining production from forest product companies coupled with a degradation of the logging infrastructure will be a significant impediment to successful development of alternative renewable energy sources in Pennsylvania, in many cases rendering projects economically impossible.
In early 2010, the Hardwoods Development Council held a series of “visioning sessions” in order to learn more about the challenges facing the Commonwealth’s forest products industry and what steps could be taken to assist it to recover. These three sessions included 44 participants from all sectors of the industry as well as representatives from key state and federal agencies. Results of these sessions, coupled with historical and current market research, are presented in this report. The Council hopes that this document may serve as a blueprint for action to support the future of the hardwoods industry in this Commonwealth.

The key recommendations from this project are as follows: (Detailed recommendations are at the end of the report).

1. Help industry access working capital
2. Reduce business tax burden where possible
3. Incentivize small scale wood energy projects
4. Promote government use of Pennsylvania wood products
5. Incentivize private forest land management
6. Adequately fund the PA Hardwoods Development Council, applied wood research and targeted industry training
7. Adequately fund BOF and PGC timber harvest programs
8. Mitigate municipal ordinances that impede timber harvesting
9. Pursue mass private forestland certification
10. Establish timber harvest advisory groups in BOF and PGC
11. Assist the logging profession with SFI logger training, and explore workers compensation cost reduction
12. Avoid road regulations that damage local wood industry
13. Promote “Green Branding” of Pennsylvania wood
14. Promote expansion of the logging infrastructure
15. Develop an information system for wood supply and demand metrics
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INTRODUCTION

Overview of Pennsylvania’s Forest Industry

Pennsylvania is home to the world’s finest hardwood forests, and is one of the nation’s leading producers of forest products. Our forest resource provides significant economic benefits to many thousands of private citizens, as well as directly to the Commonwealth itself via its ownership of timberlands. Our wood based manufacturers also provide a wide range of economic benefits to individuals and governmental bodies in Pennsylvania. Prior to the current severe economic recession, the forest products industry was identified by the Brookings Institute as a “driver” in the state’s economy.

Pennsylvania leads the nation in the growing volume of hardwood species, with 17 million acres in forest land. We have been the leading producer of hardwood lumber in the United States, with production of over 1.1 billion board feet in 2006. A 2005-2007 study done at Penn State (Strauss, Lord et al. 2007) and sponsored by the Hardwoods Development Council concluded that the industry had reached $17 billion in annual sales, with an economic impact of over $26 billion. The economic impact of the forest industry is particularly significant across rural Pennsylvania. This activity generated nearly $5 billion in annual wages among 128,000 employees (82,000 jobs in logging, sawmilling and secondary wood and paper manufacturing; remainder in transportation and other services). The study concluded that for every additional million board feet of sawtimber supplied to Pennsylvania sawmills, an additional $10 million of industrial output would be realized and 71 new jobs created.

The Pennsylvania Bureau of Forestry and the Pennsylvania Game Commission generated approximately $39 million and $15 million respectively in timber sales revenue for the state in 2006; and have generated $463 million in the past ten years. Pennsylvania’s private forest landowners take in an estimated $300 million per year from the sales of standing timber.
Figure 2. PA Bureau of Forestry Timber Sales 1995-2009
Source: PA Department of Conservation and Natural Resources
Pennsylvania’s forest resources are managed in a sustainable manner that will ensure environmental and economic benefits for many generations. Recent US Forest Service data shows that our forest growth-to-harvest ratio is better than 2 to 1. In 2006, Pennsylvania’s 17 million acres of forestland contained 86 billion board feet of sawtimber, growing at a rate of 2.7 billion board feet per year. Usage rate by sawmills that year was only about 41% of annual growth.

Pennsylvania also leads the nation in the export of hardwood lumber. Total Pennsylvania hardwood product exports reached just under $1 billion in 2008. Although exports declined in 2009 to $900 million, Pennsylvania did not decline as much as the national rate and still leads among the hardwood states. Sustained marketing and promotional efforts around the “Pennsylvania Hardwood Stands For Quality” brand accomplished through the Pennsylvania Hardwoods Development Council (HDC) in the Pennsylvania Department of Agriculture and the Regional Export Network of the Department of Community and Economic Development over the past twenty years has resulted in a distinct advantage for Pennsylvania suppliers in the increasingly competitive global marketplace.
The Commonwealth’s vast supply of high quality, renewable forest resources has allowed the hardwoods industry to become a key manufacturing sector. Pennsylvania’s forests provide the raw material for a wide variety of products, from logs and veneer to paper and kitchen cabinets. Figure 5 illustrates how the forest products supply chain flows from forests to primary products such as logs and lumber, to high value-added products such as building materials and cabinets. In between are a variety of products, including veneer that is sold overseas, transport packaging that is used by major manufacturers and distributors to move their products, and even log homes. This figure also indicates the growing opportunity of the bio-fuels markets which increasingly utilize wood as an important source of “green” fuel.
While Pennsylvania grows a variety of wood species, its strength is in fine hardwoods such as red and white oak, cherry, and maple. Therefore, we will use the term “hardwoods industry” to describe the broader wood-based industry in the state.

**Current State of the Industry**

The industry is in severe trouble as a result of the current US recession. Demand for wood products of all kinds is only half of that in recent years. Many small and medium sized sawmills have closed and larger mills have reduced their production. Overall lumber production is down to about 500 million board feet, which is much less than half of capacity. Evidence suggests that hundreds of loggers have left the business in recent years. As conditions persist or deteriorate further over the next year, many more loggers and small sawmills will disappear. A number of additional large sawmills will also close, perhaps permanently. Current employment is about 62,000 people. The effects of this recession are likely to alter the face of the hardwoods industry in Pennsylvania, which will in turn exacerbate the declining economic conditions in much of rural Pennsylvania.

The impacts of a smaller hardwoods industry are substantial, and highlight the reasons why the Commonwealth must take actions to ensure its health:
Direct Economic Impact: The long term contraction of the industry by a third or more of its production would mean no return of the more than 20,000 well-paying jobs that have already been lost, and the loss of $8-13 billion annual economic impact to the Commonwealth. These losses would fall most heavily in rural communities, where unemployment rates could remain in double digits for years. Although the industry impacts every region of the state, forest products firms account for at least half of manufacturing jobs in nine rural Pennsylvania counties and 25% or more in about a dozen more counties. Additionally, tens if not hundreds of millions of dollars in state revenues from timber sales will be lost if the industry does not recover from its current state. (Figures 6 and 7)

Figure 6. Pennsylvania Wood Products Direct Employment 1997-3Q 2009.

Source: PA Department of Labor and Industry
Figure 7. Wood Industry Employment Density by County
Source: PA Department of Labor and Industry
Impact on Alternative Energy: Many of the initiatives designed to position Pennsylvania as a leader in carbon-neutral alternative energy production, such as cellulosic ethanol, or “Fuels for Schools” type biomass-based electricity and wood pellets, depend upon reliable access to competitively priced feedstock from wood mill and forestry operations. Declining production from forest product companies coupled with a degradation of the logging infrastructure will be a significant impediment to successful development of these energy sources in Pennsylvania, in many cases rendering projects economically impossible. Likewise, affordable access to forest residuals is usually dependent upon a primary sawtimber harvest. New and emerging state-of-the-art technologies such as co-firing coal with wood would also be negatively impacted.

Impact on Landowners: Declining demand for timber stumpage from a diminished forest products industry will hurt private forest landowners and farmers. A one-third reduction in lumber production means that Pennsylvania’s forest landowners receive $100 million less from annual timber sales. That is on top of significant reductions due to recent severe drops in lumber and therefore timber prices of 30-50%. These conditions will lead to conversion of land from forest to other economic uses.

Impact On Other Users: Sawmill by-products are also used by scores of other businesses, from paper and engineered wood products manufacturers to farmers who use sawdust and wood chips for animal bedding and compost. Less access to this material will drive up costs for those operations. Long term, reduced silvicultural activity in the woods will seriously degrade the health of the Pennsylvania forest, reversing progress that has been achieved over the past 80 years and negatively impacting wildlife habitat and recreational opportunities for all citizens.

Unified action is required to ensure that much of our industry survives and will be positioned to rebound and prosper when general recovery comes. While the industry has received some support in the past, the level was never at an amount equivalent to its economic impact and has recently been reduced to almost zero.

Declining Support Infrastructure for the Industry

The Pennsylvania General Assembly in 1988 declared that “the hardwood forest industry plays a key role in the continuing economic revitalization of this Commonwealth” and established the Hardwoods Development Council to expand and promote the development and efficient use of forest product resources in Pennsylvania. The Council has since then provided focused resources in promoting domestic and international sales, technical assistance to sawmills and secondary processors, promotion for long term access to the timber resource and public education about our forest resources and the industry. The Council has also been a significant funding source for research in support of the industry.
During the past 22 years a network of regional hardwood industry support groups has evolved. This network has been instrumental in developing and expanding this business that is so critical to rural economies by serving as a resource multiplier focusing state and local efforts to directly promote growth. The groups include the Allegheny Hardwoods Utilization Group in the northwest; the Keystone Wood Products Association in the central region; and the Northern Tier Hardwood Association in the northeast. These non-profit groups are sponsored by member companies and partially financed by government grants. They translate resources to actual work on the ground.

Additionally, the Pennsylvania State Implementation Committee of the Sustainable Forestry Initiative has long been an underlying support structure promoting the health and proper management of the forest resource, responsible forestry operations by the industry, and training and education for the logging sector. It is currently a requirement on Bureau of Forestry timber sales that an SFI trained logger be present on the job. Over 6,000 loggers have received SFI training in Pennsylvania over the years.

The state has also worked in close collaboration with Penn State’s School of Forest Resources to support the industry and its development. The School has not only produced fine graduates that are now employed in the industry (and within agencies) across the state, but has also been instrumental in the conduct of significant research on wood products and forestry, contributing to increased efficiency and profitability in the industry as well as to stewardship of the natural resource.

This critical support infrastructure has been placed under significant financial strain in recent years, due to declining state and industrial funding caused by the recession. These institutions have cut staff and eliminated programs. The effect has been to limit the capability of the public and private organizations to provide industry support at a time when support is needed the most.

**Impacts of the Great Recession**

The decline of government support for this industry could not have come at a worse time. The hardwoods industry was already softening by late 2006, and then the housing bubble burst and residential and commercial construction saw drastic declines. Crisis hit US financial markets in 2008, and even with significant federal government actions, severe recession has gripped the US economy and in fact spread worldwide. Unemployment has risen to 10% (with higher rates in parts of PA), vast amounts of household wealth have been lost, and consumer confidence is very low.
A demand and price freefall occurred in the hardwoods industry in 2008 and into 2009. US production has dropped by 50%, and Pennsylvania mills have reduced production 30-50% across the board. Figure 8 illustrates how lumber consumption saw a corresponding decline. Latest PA Department of Labor and Industry statistics show that hardwoods jobs have dropped from about 80,000 at the end of 2007, to about 60,000 in the second quarter of 2009. We continue to hear of additional lay-offs and closings. Every sector of the industry has been hit hard. Wood pallet production had held for much of the period, but has seen declines in the past six months. Paper has maintained the best production rates, but supply procurement issues have become serious (causing some paper firms to import fiber from South America). These issues are compounded by the slowdowns in the other sectors and new competition for fiber from energy producers.

Figure 8. US Hardwood Lumber Consumption (2000-2011)
*Source: Berg and Lord, Penn State University; (US Census Bureau, USDA)*

Opinions vary as to whether the US economy has bottomed and the recession has turned. Many predict a slow recovery, and employment is expected to lag behind. Regardless, core economic issues critical to the hardwoods industry will continue to exist, namely low housing construction starts and frozen or very tight credit markets. Underlying that is continued low product demand worldwide. Recent upticks in lumber prices are due to lower production capacity and inventory reductions having caught up to the low demand. There are, however, some signs of the beginnings of demand increase in some foreign markets.
Experts believe that even as the US economy does begin to recover, hardwood products will lag in that recovery because of demand drivers. First, housing starts must increase markedly (initial demand will be for smaller cheaper homes with lower demand for hardwood furnishings, fixtures and finishes) second, credit must loosen, and finally consumer confidence must grow significantly to rebuild demand for high quality wood products. GDP and commerce in general must rebound significantly to drive demand for the lower grade hardwood products. The consensus of forecasts shows no appreciable increase in demand for hardwood products through 2010 at least, and probably slow increases through 2011 (see Figure 2).

At the same time, credit availability for working capital and debt service continues to loom large as a negative factor in small business survival. Access to affordable raw material supply is also a growing concern. We anticipate the attrition of more sawmills in 2010. Accelerated company consolidations are also possible. In short, cash management, productivity and efficiency, and profitability are the keys to individual company survival.

VISIONING SESSIONS

Current Action
Given the challenges facing the state’s hardwoods industry, it was determined that the HDC should develop a plan to illuminate the industry’s challenges and possible solutions. Over the past few months, the Hardwoods Development Council conducted a series of meetings (i.e., the “visioning sessions”) with industry professionals and supporting government agency representatives to ascertain the extent of the problem and identify actions that will aid recovery. We gathered experiential and statistical information bearing on the problem. The short list from industry owners, executives and managers was:

1. a primary problem is reduction in product demand;
2. there is too much government regulation and taxation;
3. companies need working capital to survive and fuel eventual recovery;
4. Hardwoods Development Council promotion and marketing assistance has been key and should be enhanced; in the short term companies may jumpstart recovery through export opportunities;
5. access to public timber will be critical to industry recovery; the PA Bureau of Forestry has done a good job of making timber available for sale, but the PA Game Commission has not done as well and the Allegheny National Forest has failed; and
6. “Green Branding” must become a major promotional campaign.

Among government representatives there was consensus that:

1. most existing financial assistance programs are not applicable for working capital needs;
2. nor are the programs authorized sufficient flexibility to respond to this kind of recession in a timely way;
3. agencies like the Bureau of Forestry accomplish significant things to help the industry, but remain underfunded in relation to historical and potential revenue returns;
4. the state should put funding into successful programs that have demonstrated help to industry;
5. regulations do generally add cost to doing business, and may also have unintended consequences; and
6. focused job training works and has strong industry support.

The time for action is now. If Pennsylvania is to be serious about sustaining this legacy industry for future generations, we must respond. A more detailed assessment of the industry’s condition and recommendations to improve the situation follow. The general outcome of the sessions is that there are a number of major issues that will have a direct impact on the ability of the industry to recover, and on the speed and extent to which the industry recovers from the current recession.

**Industry Trends Identified in Sessions**

Our visioning sessions provided us with insight into the major changes that have been taking place within the hardwood products industry over the past two decades. An example is the increasing role of exports and international trade of Pennsylvania wood products.

**Continued Growth of Global Markets**

The furniture manufacturing sector was once very strong in the United States. In the late 1990s a vast amount of American furniture-making capacity went overseas, and today resides primarily in China and Vietnam. Pennsylvania mills, both primary and secondary, had historically provided much of the high value lumber and components for this sector. As production capacity shifted overseas, our companies have had to follow the furniture makers by increasing activity in the exporting market in a serious way and developing new sales capabilities overseas. This reality continues, and exports, long a part of the market mix, are an increasing segment of Pennsylvania hardwood sales. Although much of this product has been used for finished products re-exported back into the United States, a growing volume of Pennsylvania hardwood is now exported for local use in the foreign markets. Competition to supply the foreign manufacturers is difficult, as we are going against suppliers in Russia and Eastern Europe as well as competing against tropical species. Moreover, Pennsylvania producers must compete against producers from other Appalachian states that have very strong export trade assistance programs.
Changing Consumer Tastes

Another important factor has been changing consumer tastes and preferences. For a very long time, oak was highly desired among consumers in finished products. Pennsylvania has been flush with a high quality oak resource and this was a stable marketplace. The current decade has seen a sharp decline in consumer demand for oak and similar species, particularly in furniture and cabinetry, and this fact has exacerbated the international supply competition noted above. Black cherry increased in demand among consumers and became the highest value species. Because Pennsylvania grows the highest quality cherry in the world, sales of cherry lumber and products accounted for a significant portion of total dollar volumes. More recently, however, that consumer preference has waned and as a result demand and prices for cherry have plummeted. There are some signs that demand for white oak is increasing recently, particularly in Asian markets. Consumer tastes will vary internationally, and access to foreign markets will be increasingly important to be able to maximize market opportunities among the species growing in the Commonwealth.

Increased Demand for “Green” Products

A second major consumer trend that has far-reaching implications is the “green product” movement which continues to build. Wood is a renewable and sustainable resource, but wood is not recognized by the public as a renewable resource and “green” material. The facts show that our forests have been well-managed in Pennsylvania and in the United States in general. Yet wood products have not been widely accepted in the minds of consumers as environmentally friendly “green products”, as other products (e.g., bamboo, steel, plastic shipping pallets) have become better positioned in the marketplace. Most of the various green building codes that have been officially adopted in the United States and in many local/state jurisdictions do not currently recognize wood, and especially locally-grown wood, as a favored choice in the point schemes.

Leading into the current recession, there was some sign of increased demand for third-party certified wood products (although not necessarily with an appropriate price premium). Demand for these products is expected to continue to increase as the market rebounds, certainly overseas and following more slowly but steadily in the United States. As this demand increases, it will produce correspondingly less demand for non-certified product. More than 700,000 private forest landowners owning about 60% of the Pennsylvania forest land base are not certified. Pennsylvania must solve this dilemma in order to create and sustain an adequate supply of certifiable timber in the future. State forest lands, while certified, will not be able to provide sufficient quantities to meet expected future requirements.
Another cause for concern is the “green building” trend. The LEED rating system, which has been adopted or referred to in various federal regulations and legislation, and has also been considered for adoption in Pennsylvania, wrongly discriminates against wood as a building material. The rating system gives more credit for installing a bamboo floor shipped from Asia than for a floor of Pennsylvania hardwood. Rating systems that give appropriate recognition of wood as a “green” renewable building product and that are inclusive of local wood products in scoring schemes are the systems that should be relied upon in government “green building” programs, regulations and initiatives.

The hardwoods industry across the United States, and particularly in Pennsylvania, has failed to market itself as a “green” industry. That is partly because those in the business intuitively know that wood is the original renewable, sustainable resource for building products, packaging, etc., and have wrongly assumed that the public would realize that also. In some ways the industry did not anticipate the effect of the fast growing consumer emphasis on “green products.” Meanwhile, competing industries such as steel, plastic and even concrete have positioned themselves better to be perceived as environmentally friendly despite having much higher carbon footprints throughout the life-cycle. This situation must be reversed.

Many people in this country continue to hold the ill-informed belief that harvesting trees is a bad thing. Decades of exaggeration and misinformation in the media and even in school curricula have created a widespread perception that the wood products industry is environmentally evil. This perceived reality has helped to create serious negative impacts such as: reducing the availability of timber for harvest; increasing a trend toward unreasonably restrictive local harvesting ordinances and other regulation; and causing extreme difficulty in attracting young people into the industry and to forestry science. There is much work to be done to publicize the facts about sustainable forest management and to highlight the evidence that Pennsylvania forests have been properly managed and renewed for the past century. There is more forest volume in Pennsylvania today than in 1950, and nearly as much as there ever was before the founding of the Commonwealth.
Decline of Housing Markets

One of the biggest factors impacting the industry in recent years is no doubt the decline in residential construction. The residential housing, and to a lesser extent commercial construction and renovations markets, have traditionally created high demand for hardwood lumber and secondary products. New homes require flooring, architectural mouldings, stair parts, cabinetry, doors and of course furniture. These products are also used in remodeling projects. The 1990s and early 2000s saw a high demand from these sectors for Pennsylvania wood. Larger homes were the norm and development proliferated. The recent bust in the housing market severely dropped demand for hardwood products in a very quick time. Many economists believe that even as the housing market begins to recover, demand for hardwood will lag, primarily because the renewed demand will be at the lower end of housing, where less expensive materials are normally used. Only after the demand for new homes percolates upward toward the higher end, will hardwood demand begin to significantly return. Even then, many predict that new homes will trend toward smaller sizes than what was being built in recent years, again braking the demand for hardwood volumes.

Increased Markets for Energy Wood

Burning wood for energy, cooking and heating has always been a significant reality worldwide. Wood currently provides the U.S. with two to three percent of its energy needs through residential use, electrical generation and industrial heating. In Pennsylvania, because of the volume of forest resource, using wood for energy is just as legitimate as using wood for high value products. Because energy wood employs byproducts from manufacturing operations, as well as otherwise non-merchantable portions of the tree, it is both an environmental and economic plus. Current public emphasis on developing alternative energy sources presents an additional, and potentially significant, revenue stream for the industry while also holding promise for enhancing silvicultural practice across the Commonwealth. Key is the fact that extraction of the wood energy resource must generally be accomplished in conjunction with harvesting of saw logs and pulpwood to be economically feasible.

There is great emphasis within federal and state governments, including Pennsylvania’s, on creating new sources of alternative energy. One of these efforts involves greater utilization of mill residues and low use/low value wood material from the forest for production of electricity and heat. The “Fuels for Schools and Beyond” initiative has been growing in the state for several years, and a community scale project in Smethport is progressing. Pennsylvania has utility scale wood fired electricity and steam generation, and there is much interest in developing cellulosic ethanol. We have seen a large increase in numbers of wood pellet production facilities across the state and nation, to the extent that recent drops in worldwide demand for pellets has caused some Pennsylvania companies to slow production.
A large number of companies and groups have recently explored establishing large-scale cellulosic energy projects in Pennsylvania. An essential element in any such business plan is the wood fiber procurement plan and ultimate cost of the resource. Although there is a vast amount of material in Pennsylvania’s forest overall, concentrations are widely varied geographically, and the actual availability and accessibility of the supply varies greatly depending on many factors. Not the least of which is competition from existing users of the resource, market conditions, and feasibility of removing material from the woods and transportation to the energy production site. It is not generally economical to harvest the material for energy if not coincidentally harvesting higher value material for other users. It has been remarkable to realize that most of the energy parties to date have little understanding of the dynamics of fiber supply. On the other side of the coin, if a large energy producer with unlimited funds (or significant subsidies) in hand arbitrarily located in a wrong place and began to buy up all the supply at artificially high prices, there would be significant negative impacts on existing wood and paper industry operations which are large job providers in the Commonwealth.

A comprehensive study of the Low Use Wood Resource in Pennsylvania published by the Hardwoods Development Council in 2008 revealed that there is up to 6 million dry tons of material that could potentially be sustainably harvested annually to produce energy; and that local institutional or district scale projects are the most likely to succeed. The Bureau of Forestry has published guidelines for sustainable harvesting practices for this biomass, and it is believed that a significant amount of material can be harvested in concert with on-going sawtimber activity to produce additional cash flows for landowners, loggers and the energy markets.

It must be recognized that the new market development will be trying to take place in the face of increasingly restrictive local regulations and higher fees. These create higher harvest costs which is counterproductive when dealing with a lower value material. Government subsidies will no doubt jump start some projects, but there will likely be unintended or unwanted consequential impacts on existing markets based on competition for the fiber resource. A good example is the Biomass Crop Assistance Program begun this year by USDA. Its purpose was to provide incentive for suppliers to provide new quantities of biomass material for production of energy. Cash payments up to twice the market value were offered. Within months, the USDA realized that the program was radically altering existing commerce of regular supplies of the material and was not going to produce much additional energy. Current users of the material were adversely affected. USDA has suspended the program for review and revision.
Structural Changes in Industry

Consolidation and Emergence of Large Production Mills
Over the past 20 years, a transformation in the sawmill sector in the United States and in Pennsylvania has been occurring. Larger mills expanded, became much more efficient through technology and through adoption of “lean manufacturing” techniques and practices, and capacity increased. At the same time, there has been a decline in the number of small mills, in part due to competition, and in part due to retirement of owners and successional divestments. Family owned small business has always been a significant part of the Pennsylvania hardwood industry; while that is still very true, the trend is moving toward larger operations with various ownerships. Emergence from the current recession will likely accelerate this trend.

Decline in Logging Industry
On the raw material supply side, there has been a steady decline in the number of individuals and companies engaged in logging in Pennsylvania. The industry estimates that about 30% of the logger infrastructure has been lost in Pennsylvania in recent years because of the downturn and because coincidentally (and fortuitously for loggers), good opportunities are presenting in the Marcellus shale development. According to a recent survey sponsored by the Hardwoods Development Council and conducted at Penn State University, 280 loggers still in business largely agree on major barriers to maintaining or expanding their business. Rising insurance and workers compensation costs, expense of new logging equipment, rising fuel costs and low market prices for logs are among those barriers. Road posting and bonding requirements are also of serious concern. Only 60% of loggers expect to be in the logging business five years from now. Loggers also face increasing difficulty in securing steady markets among fewer and larger mills. Exacerbating this trend has been the general drop in interest among young people to engage in this line of work and lifestyle. Increasing sub-urbanization, lack of emphasis and opportunity in school curricula, and the high-tech nature of today’s society have all been cited as root causes. A divided public perception about the profession of logging also has negative implications for the future workforce. Reductions in the costs of doing logging business, recruitment of new people into the trade, investments in equipment and specialized training of loggers will be increasingly important to sustaining and growing the infrastructure that will be necessary to supply increased production in the years ahead.
Growing importance of low value wood

Pennsylvania has traditionally been a significant producer of utilitarian wood products, notably shipping pallets, railroad ties and industrial timbers, which make use of lower grade material (i.e., the portions of a log that are not of suitable quality to make higher value products). These products continue to be in constant demand; however, as a result of the general decline in commerce during the current recession, these sectors have experienced decline as well. As demand for the higher value added products has dropped, it is estimated that as much as 50% of total industry production is currently centered in these lower value sectors.

Supply Challenges

Although we have lost a large number of mills and most mills have sharply curtailed operations, high total production capacity still exists throughout the industry. In fact, even during the most recent period of peak demand in 1999 – 2000, mills were not operating at 100% capacity. Therefore, when demand rebounds, it is logical to assume that Pennsylvania mills can ramp up production levels as required if other factors are conducive to that happening.

Currently, there is a scarcity of standing timber available for sale at profitable pricing. Low lumber and product prices have driven down stumpage prices. Mills cannot pay what was normal a few years ago given current operating margins. That fact has caused private landowners to take standing timber off the market. Most landowners can wait many years until prices turn back up. Less timber is being made available from development projects, as those projects have stopped or not started. The recent beginning development of the Marcellus shale play is also having impacts on the wood products industry. On the one hand, new income from gas leases has reduced the impetus for some forestland owners to be interested in offering standing timber for sale, further limiting availability of the resource for mills. On the other hand, there is some opportunity for additional wood material supply to be realized from the land clearing operations associated with installation of gas well pads, access roads and pipelines. The Bureau of Forestry currently requires that logging operations on state lands be performed by loggers who are Sustainable Forestry Initiative (SFI) trained. Extending that requirement to the forest clearing operations for gas production would increase the amount of material salvaged and merchandized, benefit Pennsylvania loggers, and contribute to environmental protection.
Those factors above put additional pressure on public lands to provide the raw material for production. Recent experience of the PA Bureau of Forestry has shown increasing difficulties in completing timber sales. At the same time, increased new workloads around the Marcellus Shale play put additional strains on staff and resources. These conditions will persist for some time to come. There is on-going scrutiny of the timber harvest program of the PA Game Commission. While habitat appears to be the highest priority forest value driving the Commission’s forestry activity, we believe that additional emphasis on sustainable timber harvesting would not only be economically prudent for both the Commission and the industry, but would also be able to contribute to the overall health of the forest thereby having a positive impact on wildlife habitat.

Another factor influencing wood supply is invasive species and forest health issues. This has most recently manifested in the form of the Emerald Ash Borer, an invasive beetle originating in China that has been identified in 12 counties of western to central Pennsylvania. The insect destroys the Ash species, and discovery has led to a quarantine that precludes the movement of untreated ash logs or products from the quarantined area. Cooperative efforts among the USDA, PDA, the Hardwoods Development Council and the Pennsylvania Forest Products Association have led to control measures that allow commerce to continue in a reasonable way. Should the insect continue to spread and destroy much of our existing ash resource as it has in Michigan, as much as 5% of the current lumber production would have to shift to other species. Pennsylvania’s forest is also currently threatened by the Gypsy moth, Hemlock wooly adelgid, the Syrex wood wasp, Asian long-horned beetle, and a number of other insects and invasive plants. We must continue to fund programs to prevent, mitigate and control infestations of these serious threats to the forest health and the industry that relies on the raw material.

**Lack of Capital**
The nature of wood products manufacturing requires front end cash for the raw material, and then the carry of inventory through the production processes and through sale and delivery. As a result, working capital and lines of credit availability will always be a major issue for Pennsylvania mills. Industry leaders say that access to working capital and lines of credit is the most significant impediment to recovery for this industry. Stimulus funds that have already been authorized but not spent need to get in the hands of small business, or not spent at all. Banks must be encouraged to lend again.

**Regulatory Hurdles**
Underlying these conditions is the fact that regulatory costs faced by the industry continue to increase, not decrease. For example, road bonding and weight limitations inherently disadvantage haulers of logs, pulpwood and woody biomass from the woods to the mill because the product is heavy but there is a small profit margin. Recently there has been a proliferation of actions to increase bonds and post more roads. This has been particularly true in the north east over concerns with Marcellus gas operations. Loggers who are typically traveling 50 to 100 miles to deliver to mills can least afford the increased cash requirements for bonding, and often have few route options available.
The impact of other existing state and local permit fees for harvesting and other costs of regulatory compliance has increased in the current recession, as low prices have seriously eroded, if not erased, profit margins. This has had the effect of making additional acres of forestland economically inaccessible; denying some private landowners the ability to sell their timber and further reducing the supply of raw material for our mills. Furthermore, the current initiative aimed at restoring the water quality of the Chesapeake Bay envisions new regulations that might include additional restrictions on timber harvesting in buffer zones around streams and rivers. While such actions may have a positive impact on water, they may also have unintended negative impacts on access and costs of harvesting and the ability of landowners to sell their standing timber, in some cases precluding the activity altogether. The Hardwoods Development Council and Department of Agriculture must maintain an active involvement in shaping these policies.

It is important to note that formal annual reports filed by the PA Department of Environmental Protection have consistently stated that timber harvest operations have been an insignificant non-point source of water pollution in Pennsylvania. A stark example is in paper and manufactured board production. Pennsylvania formerly had a large number of these facilities, using 3 million dry tons of material annually. Today there are just a few manufactured board operations and only three significant paper mills, using about one million tons. Common knowledge is that because of the cost of environmental regulations, we will never see a new plant constructed in Pennsylvania.

**Local Land-Use Ordinances**

Another related disturbing trend has been the increasing frequency of troublesome local municipal ordinances that discourage or effectively prohibit commercial timber harvesting. Sometimes well meaning but ill informed government bodies create restrictions that are simply inappropriate, if not outside their authorities. Some ordinances appear to be designed to prevent harvesting. In many instances fees for permits and plan reviews have become unreasonable. These ordinances impose large and sometimes prohibitive costs on mills, but also have a primary negative impact on local forest landowners who suddenly cannot sell their standing timber as companies simply avoid those locales.
Land Ownership Issues

Ownership of Pennsylvania’s forest has been changing as well. While the relationship of private to public ownership has been steady at about 70% to 30%, important changes have occurred within the private side. Family successions and development have resulted in an amazing increase in the number of private forest landowners, from an estimated 500,000 ten years ago to over 700,000 today. This has also caused an increase in parcelization, and the attendant decrease in the average size of landholdings among the ownership. These facts have many implications for overall forest health and other things, but have a particularly adverse impact on the ability of loggers and mills to secure adequate supplies of timber. These conditions have resulted in increasing pressure on the management of public lands to provide more timber for commercial harvest than the 5-10% of the total requirement they have traditionally provided. Although the Pennsylvania Bureau of Forestry has done an admirable job of maintaining a steady supply availability, the Bureau has been limited by budgetary realities and competing public values and uses for the land. The Pennsylvania Game Commission has historically not provided a level of timber availability that the industry deems adequate. A major consideration has been that the primary goal of the Commission is to sustain wildlife habitat. The Allegheny National Forest, on the other hand, has failed miserably to make sufficient volumes of timber available for commercial harvest. Over the past 25 years, the ANF has achieved only about 50% of its own approved and published harvest goal. Competing interests regarding various forest values and a significant amount of attendant litigation have severely damaged the ANF timber sale program.

The wood products industry itself has largely divested of forest landholdings across the country, which has been mirrored in Pennsylvania. Publicly traded companies own only about 3% of the Commonwealth’s forest. There has been a rise in Timber Investment Management Organizations and Real Estate Investment Trusts acquiring forest land. The goals of these organizations do not necessarily coincide with the supply requirements of local wood products producers. As a result of limited access to public lands, and the increasing challenges to economically locate, purchase and harvest timber on private lands, most Pennsylvania mills have been forced to acquire as much as one quarter or more of their timber resource from outside their local area, sometimes in adjoining states. This fact has had obvious negative impacts on costs, local economic activity, and forest health.
Business Climate Uncertainty

Most of Pennsylvania’s wood products companies are small businesses and as such share the uncertainties of federal and state impacts on the future business climate. There are a number of significant federal actions pending that may have additional major negative impacts on the hardwood industry. Serious questions exist regarding what form national health care reform or health insurance reform will really take, and whether small business costs will go up or down as a result. The “Cap and Trade” bill passed in the US House of Representatives would significantly raise energy and regulatory compliance costs on manufacturers and operators through the entire fiber supply, production and distribution chain. Additional environmental and climate change regulations that are contemplated have potentially severe impacts on the industry.

The overall economic situation in Pennsylvania is not widely viewed by companies to be business friendly. Business taxes are among the highest in the country; tax relief for small business is key for all sectors of the economy. Regulatory compliance costs and fees all have contributed to decreased profitability. Additional water quality and transportation regulations would add more costs and further limit resource availability. The budgetary pressure for future tax increases or severe cuts to state and federal programs (or both) creates additional uncertainty that is not conducive to rapid and sustained economic recovery.

These factors have and will continue to diminish the competitiveness of Pennsylvania hardwood products companies. Over the past decades, we have lost much of our manufacturing base as businesses have either closed, or moved to other states or overseas. Future government policies and actions will play a large role in determining whether the remaining industry survives or whether previous capability can be re-built.

Data Availability

Underlying the discussion of the status of the industry is the fact that Pennsylvania does not have adequate information systems, data bases or mechanisms to enable realistic and timely understanding of wood demand, supply, fiber flows, production and sales. This means that we lag in the capability to measure activity and assess problems and opportunities. Good data is tracked on export sales but not on domestic sales which are 90% of the business. Employment data is available, but is at least a year behind. Production data is not captured, nor is data on timber supply, demand or fiber flows. Analyses are forced to rely on projections from snapshot surveys which have typically been done years apart.
CONCLUSIONS AND RECOMMENDATIONS

Dire conditions currently pervade the wood products industry in Pennsylvania. Today’s problems are primarily demand driven. This is not a case of bad management or product obsolescence. Housing construction will eventually rebound, and people will always need houses and furnishings. Consumer preference for fine wood products will return in the United States, and demand for our products may grow among the rising middle classes in China, Vietnam, India and elsewhere around the globe in the coming decades. However, timing is everything. There is no guarantee that Pennsylvania will retain its position as a leading hardwood producer. Many believe that the industry is at some risk of total collapse in the next two to five years. The loss of this industry would forever change the face of the Commonwealth. The loss of $27 billion of annual economic activity would have a ripple effect that would multiply the negative impacts and devastate much of the rural economy. Loss of tax revenues, timber sales income and population migrations would be severe. Forest health would deteriorate significantly across the state, and long term changes in species composition and bio-diversity as well as an increase in disease, infestations and forest fire would be expected.

Pennsylvania can continue to have a sustainable high quality resource and for its products, will have proximity to major markets and transportation, and growing global demand. Future success relies upon the ability of our companies to first weather this recession and survive, and then to continue to be efficient, innovative and productive. The future tax and regulatory environment of the Commonwealth must be conducive to successfully competing in the world marketplace. Given the will, we can attempt to preserve this legacy industry that is so crucial to our rural economies and way of life.

RECOMMENDATIONS

Council recommendations are arranged below in three categories: Legislative; Budgetary; and Executive actions. Within each category, the recommendations are in priority order:

Legislative

1. Help companies access working capital and cash needed in recovery by re-directing a percentage of state and federal economic development funds in existing programs into adequate financial products for working capital and revolving lines of credit. Increase the cap on working capital loans in the Small Business First program from $100,000 to $200,000.
2. Reduce the tax burden on business where possible.
3. Provide subsidies and incentives for small scale, community-based wood energy projects, such as “Fuels for Schools and Beyond” type projects and conversions. Ensure state economic development funds and tax incentives are available for these projects, including projects and systems installed by existing wood products companies for energy production or efficiencies.

4. Promote and favor the use of Pennsylvania wood products in government building projects and in other government procurements. Require new construction or renovation projects in state owned facilities to fully consider wood fuel heat and energy systems, including life-cycle costing analyses, and incentivize selection.

5. Stimulate the supply of timber by providing tax incentives to private landowners who maintain working forests and engage in active sustainable forest management.

Budgetary

6. Adequately fund and staff the Pennsylvania Hardwoods Development Council to allow it to continue to promote access to the timber resource, provide marketing and trade promotion programs, provide public education and promote sustainable forestry management. Restore funding for applied research designed to improve the competitiveness and profitability of the industry, and provide funding for targeted training opportunities for industry personnel and students.

7. Adequately fund and staff the revenue generating timber sale programs of the PA Bureau of Forestry and the PA Game Commission. Work to enable the PA Bureau of Forestry and PA Game Commission to achieve 100% of planned annual harvest goals, which should reflect maximization of timber supply. Provide additional resources for the Bureau and PGC as needed to conduct necessary salvage harvest above traditional harvest for forests impacted by pests, disease and weather.

Executive

8. The Department of Agriculture should continue to work with industry, PSATS, Penn State, DNCR and others to address the excessive fees and arbitrary and prescriptive mandates imposed by some municipalities as part of their timber harvesting permit process that will impede the economic recovery. Provide additional assistance to forest landowners and buyers in dealing with unreasonably restrictive municipal ordinances affecting sales of standing timber.

9. The Departments of Agriculture and Conservation and Natural Resources should devise a method to accomplish third party certification en mass for the forest of Pennsylvania. Such a system should include the certification of “legal” harvesting practice to meet international requirements.

10. The PA Bureau of Forestry and the PA Game Commission should establish Industry Timber Harvest Advisory Groups to provide the organizations with formal and regular input on issues related to timber contracting, harvest and interaction with other forest uses.
11. The Department of Agriculture and the PA Hardwoods Development Council should address the high cost of worker’s compensation insurance for loggers by exploring methods to reduce those costs. Support and seek funding for the Sustainable Forestry Initiative Logger Training program, and promote the safety benefits resulting from that training and the numbers of trained loggers to the insurance providers.

12. The Pennsylvania Department of Transportation should avoid a disproportional negative impact on the forest products and other local industries when considering new regulations, road posting and bonding requirements that may be initiated in response to the Marcellus Shale play.

13. The Department of Agriculture and the PA Hardwoods Development Council should develop and fund a promotional program designed to highlight Pennsylvania’s hardwood resources as a sustainable building material. Such a marketing program would help build our “green brand” and create additional demand from homeowners, architects and builders and international markets who might otherwise source products elsewhere.

14. The Departments of Agriculture and Community and Economic Development should promote the expansion of the logging infrastructure in the Commonwealth through career promotion, education and training. PDA should partner with the SFI program, Regional Hardwood Groups, the state Workforce Development structure, and Department of Education to advance these goals.

15. The Hardwoods Development Council should develop and fund an information system designed to quantify supply and demand for wood materials. This would include fiber flows of materials that could be used for fuel, as well as production and sales volume of value-added products. We believe that a comprehensive system should also track employment data and timber supply. Penn State would collaborate to design the system and manage the data bases.