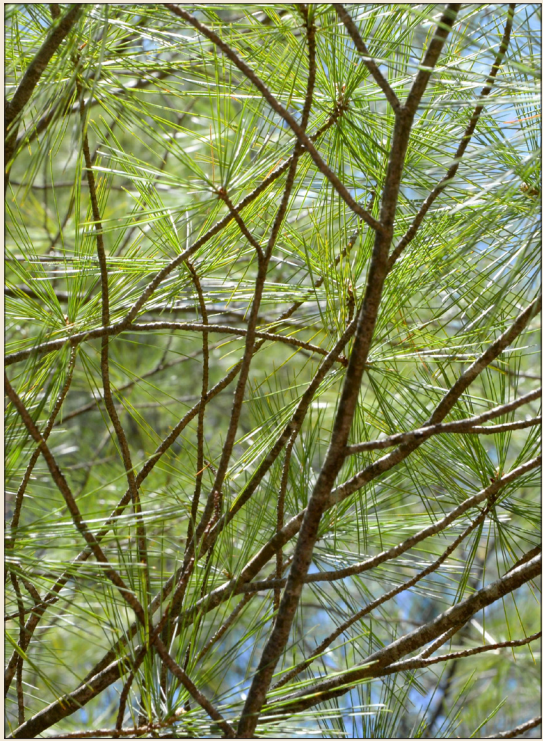




The Economic Contribution of Logging and Trucking in Maine



A Study of the Impact of Professional
Logging and Trucking in Maine



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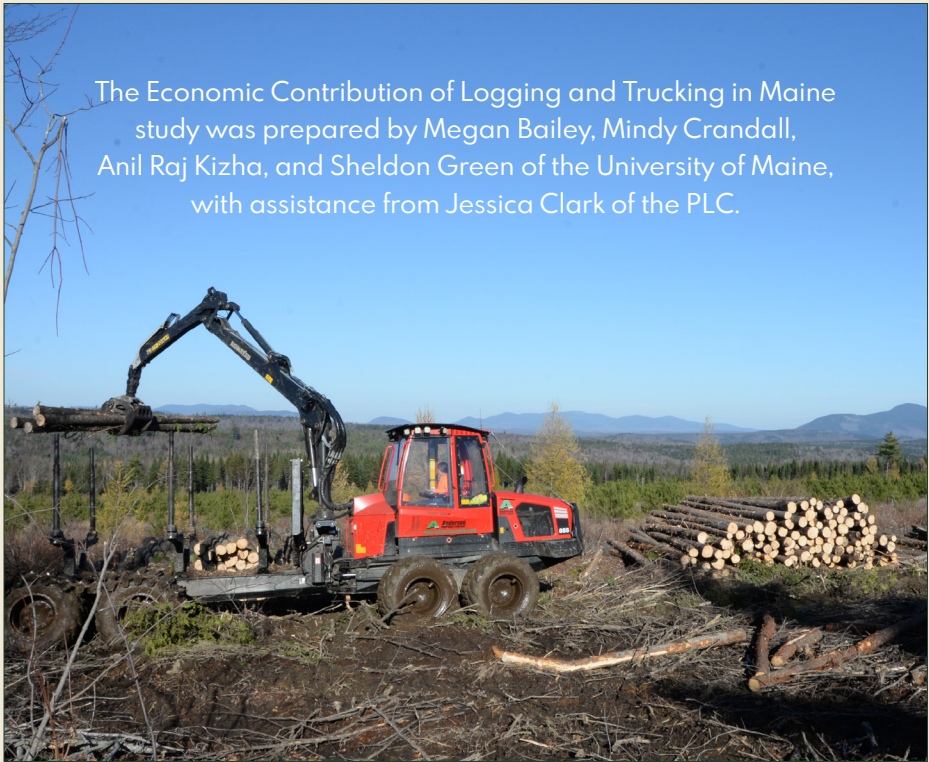
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The Professional Logging Contractors of Maine (PLC) is Maine’s only trade association which exists to give independent logging contractors and sole proprietors a voice in Maine’s forest products industry.

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The Economic Contribution of Logging and Trucking in Maine study was prepared by Megan Bailey, Mindy Crandall, Anil Raj Kizha, and Sheldon Green of the University of Maine, with assistance from Jessica Clark of the PLC.

LOGGING & TRUCKING: IMPACT

By Megan Bailey, Research Associate, Margaret Chase Smith Policy Center, University of Maine

Maine’s forest products industry has long been hailed as the backbone of the state’s economy – and the foundation of the industry is logging. The strength and resilience of the logging sector is increasingly important as Maine’s forest products industry competes in a global market.

In 2016, researchers first set out to specifically highlight the logging industry’s economic role in Maine through a comprehensive study of 2014 data. In early 2020, the Professional Logging Contractors (PLC) of Maine released results of an updated comprehensive study on the economic impact of logging and trucking in Maine, showing the industry contributed an estimated \$619 million to the state economy in 2017. In both studies, data for the most recent year available was utilized.

The logging and trucking industries contribute directly to the Maine economy through both day-to-day operations (e.g. direct sales, wages, employment of workers) and indirect effects. In addition to day-to-day operations (direct impacts), every dollar that is spent on local purchases by any business or individual involved in the logging and trucking industries circulates throughout Maine’s economy and is used by other businesses and organizations to pay their employees, taxes, and purchase more goods and services (indirect impacts). This “multiplier effect” is

a crucial component to consider when studying the total economic impact of the logging and trucking industries on the state of Maine.

The study, “The Economic Contribution of Logging and Trucking in Maine”, included an analysis of these direct and indirect impacts as well as the results from a survey of industry members. The study revealed that in 2017, including multiplier effects, logging supported over 9,000 full-and part-time jobs in Maine, generated \$342 million in labor income, and contributed an estimated \$25 million in state and local taxes. Maine’s logging industry affects businesses across the entire state through

Maine Logging Creates
9,366
direct & indirect
jobs

economic
impact
\$619M

the activities of logging companies (businesses and individuals) and the purchases that they (and their employees) make. It is clear that logging remains critical to a range of industries and companies across

Maine, as well as serving as the foundation of the state’s \$7.7 billion forest products economy.

The industry is heavily dominated by small family businesses, with the vast majority employing fewer than five people. Survey responses indicate, as they did in 2014, that logging companies in Maine are processing a significant amount of the statewide harvest on highly mechanized equipment requiring skilled workers and significant financial investments.



THE INDUSTRY

By Tony Madden, President, Professional Logging Contractors of Maine

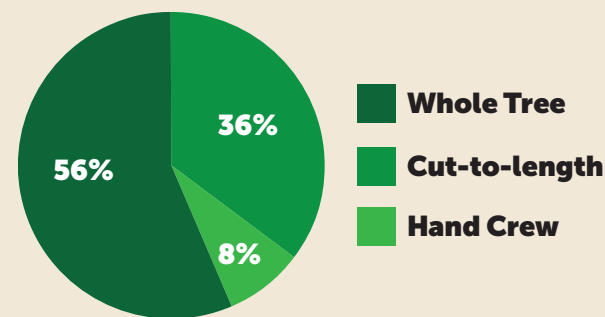
The logging industry has seen many changes over the years, and today is more advanced than ever, but also more challenged. Loggers are no strangers to hard times, but as I write this in late 2020, times have never been harder.

As this study reveals, our industry is steadily growing more mechanized, but smaller in terms of businesses and employees. Despite this, we continue to harvest more than 12 million tons of Maine timber each year.

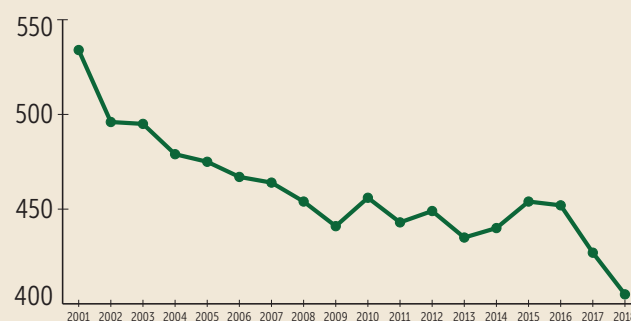
Information from the U.S. Bureau of Labor Statistics on forestry and logging businesses (those with employees), show both the number of employees and establishments in the industry have declined since 2006 by 14% and 7%, respectively. At the same time, the real average wage for workers in the logging industry in 2017 was \$47,289 (in 2018 dollars). Average annual earnings for all employment in Maine's logging industry has increased by just over \$2,100 per worker since 2010, compared to an average increase of \$5,500 in comparative industries, such as construction, wood manufacturing, and pulp and paper manufacturing. The logging industry faces challenges attracting enough workers, and must compete with other heavy equipment industries for skilled machine operators.

A survey of PLC contractors in this study showed mechanization is dominant in the industry: Fully 92 percent of surveyed firms were identified as whole tree or cut-to-length harvesting operations. Only 8 percent were identified as conventional hand crews using chain saws.

Harvesting Methods



Number of Logging Establishments



This is a far cry from when my dad, Fernald Madden, started logging in 1950, trucking wood after loading it by hand with a truck that was not much heavier than the pickup I drive today. When he got home at night my mom drove that same truck to town to get groceries. That was a challenge! Horse logging was the way to go then, no mechanics needed, but you still needed a farrier to trim the hooves and fit the shoes. Also, someone had to stay at the logging camps to feed the horses and shovel manure.

In the early 1960s my dad used small dozers, track bombardiers, and my uncle even converted an army tank for yarding wood. My dad migrated to cable skidders in the 1960s and 70s, and these worked well. I purchased my first used cable skidder in 1980.

In the four decades since then my business has steadily moved to complete mechanization. For most of that time markets were good, and while the work was hard, it remained profitable and rewarding.

Every few years our industry is faced with new challenges. 2020 is definitely one of those years. We have our usual challenges such as high truck and equipment costs, rising insurance costs, a shortage of experienced labor, and challenging weather conditions, but in addition have lost a major wood consuming mill to an explosion and are caught in a worldwide pandemic on a scale that we haven't seen for 100 years! Now that's a real challenge, but loggers are resilient and adaptable, and we will continue fighting for this industry and way of life that we love, knowing that challenges come and go, but logging goes on.

HARVEST & VALUE

By Patty Cormier, Maine State Forester

Timber harvesting is the foundation of Maine's entire forest products economy, and an important tool for managing forest health. This makes the logging and forest trucking industry critical to the state.

For 2018, Maine Forest Service data showed 12,144,278 tons of timber were harvested in Maine including 4,275,849 tons of saw timber, 5,391,052 tons of pulp wood, and 2,204,145 tons of biomass. That was an overall decrease from 2014, when data showed 14,189,378 tons of timber were harvested in Maine, including 4,005,344 tons of saw timber, 7,289,270 tons of pulp wood, and 2,894,764 tons of biomass.

Wood pulp, wood, and paper and paperboard are Maine's 5th, 6th and 7th most valuable exports, respectively, according to the U.S. Census Bureau.

Professional, responsible logging is key to maintaining our state forest health; preserving woodlands for recreation, tourism, and wildlife; and managing fire dangers.

We are lucky to live, work and play in a state that is 89% forested. And when we talk about those who work in this heavily forested state, in the forest industry, timber harvesting is the foundation of Maine's entire forest products economy. No harvesting, no products the consumer demands; no harvesting, no forest management to satisfy the many values that landowners hold dear for their

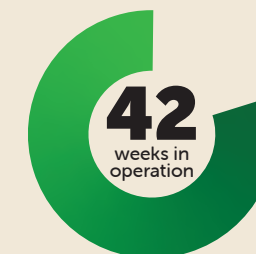
property. But it certainly goes deeper than that.

A top priority of the Maine Forest Service is to support all facets of the forest products industry. In fact, within the soon to be released 2020 Forest Action Plan, the number one issue identified under the "Issues, Threats and Opportunities" section is "Supporting a Diverse, Robust Forest Products Industry". That cannot be done without supporting a healthy timber harvesting environment.

I always say that it is about balance in our forests. The balance that allows the timber harvesting, the forest products, forest management, protection of the resource and forest health and all the other many unique values one can think of with regards to the Maine forest. That balance also includes protecting all the ecological systems at play in the forest. It all has to be integrated. An analogy that is often used is the old wagon wheel with the multiple

spokes. If one spoke of the forest wheel is missing or compromised, there is extra pressure put on the other spokes which will eventually lead to failure. None of us want that.

We are so lucky to have our special natural resources in Maine, and the Maine Forest Service applauds and supports those who make all aspects of the forest industry run. We know it isn't always easy.



PLC Member survey of average annual operations, 2018



TRUCKING

By Steve Theriault, Owner, TNT Road Company, Fort Kent

Trucking, as expressed in this study, is critical to Maine's logging industry. However, as important as it is, a shortage of drivers, inability to offer competitive wages, higher operational and equipment costs (i.e. Tier 4 engine requirements), more distant markets, and declining infrastructure is challenging the ability of logging companies to move wood and remain profitable.

Trucks are the primary way loggers get wood to markets, and many logging companies maintain and operate their own. A survey of logging contractors conducted as part of this study showed most trucked either all (37%) or much (22%) of the material harvested by their company. Three percent rarely trucked their own material and 38% contracted with an outside source for all their trucking needs.

The same survey conducted in 2014 and compared with the most recent one reveals the percentage of companies hauling all their own wood and the percentage hauling none of their own but relying on outside contractors both rose significantly, by 11 percent and 14 percent respectively. The 2014 and 2018 results indicate that 20-25% of the employees in the logging industry may be truckers by occupation. The industry is also seeing those who want to be their own "owner operator" met with more lenient banks and/or financing through dealerships are increasing because of the "one stop shop" opportunity.

The shortage of truck drivers is a national issue. In Maine, the shortage is compounded by the fact that

many logging truck drivers are now at retirement age. The demands of woodland trucking can be an obstacle to attracting new drivers, and it is getting more difficult for logging companies to attract experienced drivers because of competition elsewhere in the trucking industry offering better pay/benefits and a stronger working environment. It is hard to compete with other industries who profit more so they can offer more.

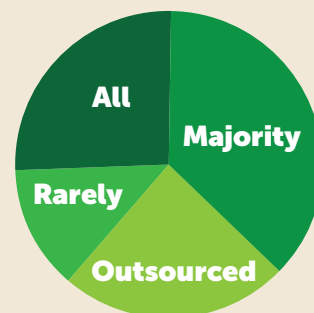
Maine's declining public road infrastructure places additional strain on trucks and drivers as their use becomes more important as the use of private logging arteries (i.e. Golden Road) decline. Trucking companies pay a great deal in taxes and fees and really want to see improved infrastructure as a result. The state and federal government invest significantly in rail infrastructure and we need to ensure our roads and bridges receive the same attention.

As we are all aware, the forest products industry in Maine has been through rough times over the past decade. Mills have closed and jobs have been lost. We have labored through these tough times but at the end of the day, our work ethic and desire to make a living by working with our natural resources has sustained us.

Maine will always need a strong trucking workforce to transport wood to markets along with common-sense legislation and regulations if the logging industry in Maine is to succeed. Today, and for the foreseeable future, logging cannot exist without trucking.



Percentage of Trucking Logging Firms Handle Themselves



All: 26%
Majority: 37%
Rarely: 13%
Outsourced: 24%

Survey of PLC Member Companies

EMPLOYMENT & WAGES

By Ryan Wallace, Ph.D., Maine Center for Business and Economic Research, University of Southern Maine

Although the COVID-19 pandemic has caused major disruptions in the markets for forest products and the supply chain, there continue to be looming challenges for the logging industry that will transcend these disruptions.

The logging workforce is rapidly aging and large numbers of workers will soon be retiring and need replacement. Sixty-two percent of logging industry workers are 45 or older, compared to 55% for all production employment and 50 percent for all industries. Occupation projections suggest upwards of 200 workers per year will need to be replaced over the next 8-10 years due to an aging workforce. Attracting younger generations of workers will be critical in replacing the retiring workforce, however, there is a disproportionately smaller share of younger age workers in the workforce pipeline to recruit from and replace retirements, not to mention the lost knowledge and expertise retiring workers take with them. Competition for workers across the state is intensifying and reaching crisis levels in many industries, including logging and other manufacturing and production oriented sectors of the economy.

Success in attracting and retaining workers is highly dependent upon the compensation workers can receive for a set of skills in one job compared to another, or for the same job in a different industry. Maine's logging industry has been challenged in offering competitive wages to attract and retain

workers and compete against other industries vying for the same dwindling pool of workers. Although capital expenses in the logging industry have risen across the board, prices paid for wood at mill facilities have not. This scenario has left little room for logging businesses to offer higher, more competitive wages to workers or to entice new businesses to enter the industry.

Business critical occupations in the logging industry, including equipment operators and truck drivers which comprise two out of every three jobs, currently earn relative wages below comparable occupations in other industries making it difficult to recruit and attract workers, particularly when labor markets are tight and desired skill sets are in short supply. Stagnant or negative population growth and an aging population across Maine, particularly in rural areas, greatly limits the potential pool of workers further constraining long term workforce prospects. If

the industry is to meet the projected demand for harvested wood fiber, a significant boost to the logging workforce pipeline will be required, which will largely be dependent on the ability of the industry to pay higher wages that can attract and retain workers in an intensely competitive labor market. Paying higher wages will be predicated upon higher prices at the mills.

Note: This is an updated excerpt from the 2019 Professional Logging Contractors of Maine Maine Logger and Log Trucker Employment Availability and Wage Analysis Report



KEY ISSUES

SAFETY

By Ted Clark, Loss Control Consultant, Acadia Insurance

In an industry that has learned to be nimble and operate on shoestring budgets, the importance of reducing costs has never been more prevalent than today, where market volatility continues to define the day-to-day life of a Maine logger. As reduction of costs continues to be on the forefront of everyone's mind, reduction of incidents needs to be everyone's focus, as one bad safety-related loss can have long-term negative effects on the company.

There are two types of costs associated with a loss: direct costs and indirect costs. Direct costs are expenses that result from a loss that are either covered by the insurance company (medical and compensation costs) or paid for through a deductible. These losses can have more effects than the initial costs, as each loss plays a role in developing a loss trend. Negative trends and high loss areas can result in elevated premiums and possibly cause the insurance company to non-renew the policy, forcing the logging firm to find coverage elsewhere, often at a more expensive price.

Indirect costs are typically significantly higher than direct costs, and are generally not covered by an insurance policy. These costs can include: delays in production, legal expenses, overtime expenses, hiring and training costs, regulatory fines, and many more.



In recent years, many of the logging companies in the state of Maine have collectively begun a systematic and broad approach towards reducing injuries and incidents within the logging industry. With commitment demonstrated through training, certifications, incident investigations, loss control collaboration and more, the industry continues to show significant results through reduced losses, better regulatory compliance, improved public image and the accompanying cost control. In addition, focus on incident reduction creates a safer work environment, improves employee morale, and attracts new talent into the workforce. Based on a PLC analysis of U.S. Bureau of Labor Statistics data, In 2018, the most recent year which allows a direct comparison between Maine and national rates, Maine loggers suffered approximately 36 percent fewer recordable injuries and illnesses among full-time equivalent employees than loggers nationally.

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KEY ISSUES

WORKFORCE DEVELOPMENT

By Donald Burr, Coordinator of the Mechanized Logging Operations Program

Today's successful logger is technology savvy, a fast thinker, and an efficient wood fiber producer. A logger is expected to understand the delicate balance of production, environmental protection, and-most of all-working safely on a dynamic job site.

With current job restrictions keeping anyone under the age of 18 from being on a commercial logging site, young people have no opportunity to work with their parents and learn the logging trade. Another obstacle to young people entering the logging profession is the cost of buying & operating today's mechanized logging equipment. The cost of a new piece of equipment can be anywhere between \$350,000 for a basic grapple skidder to \$800,000 for a cut to length processor.

As these obstacles limit entry of young people into logging, the average age of the current logging workforce is creeping upward, with many workers at or near retirement, and not only do we need to replace the person doing the job, but we also need to replace the knowledge & wisdom of these workers. Combined, these employment storm fronts mean Maine has a huge need for foundational skill & safety training for the logging industry.

What are the current options for replacing the aging workforce? At the high school level, five high school programs across the state focus on logging, based out of the Maine Career and Technical Education Centers (CTE). In these schools, the students are taught tree species, wood product marketing specifications, hand felling, chainsaw safety & maintenance, and harvest layout. Three other high school programs have forestry as a module of their outdoor or heavy equipment programs. Students

in these programs can develop skills and practice in a classroom environment (indoor & outdoor), but they cannot join the workforce until they turn 18.

At the college level, Maine is fortunate to offer a unique 12-week certificate program that focuses on developing a mechanized logging operator's fundamental skills. The Mechanized Logging Operations Program (MLOP) is a partnership between the Professional Logging Contractors of Maine (PLC), equipment dealers, and the community college system - particularly Northern Maine Community College. This course takes



students from the CTE schools as well as students who may have no experience or base skills and conducts a logging operation for the summer season just as a commercial logging contractor would. There is no age cap on who is eligible, and over four seasons MLOP has trained students fresh out

of high school as well as students who have been in the workforce for decades.

The first week of an MLOP course is focused on safety and tree identification and characteristics in a classroom, then students move into the woods. Every student gets one week in each piece of equipment until they work through six types of mechanized logging equipment. After they gain basic skills with each type, they then specialize in the equipment that interests them the most or that they have already been hired to run once the course is completed.

In today's fast-paced and fast-changing logging industry, education is the way to pull out of the nosedive in worker availability that is challenging the industry's future.

KEY ISSUES

PROFESSIONALISM

By Ted Wright, Executive Director, Trust to Conserve Northeast Forestlands

Logging today, especially with challenging market conditions, demands an increasing level of professionalism and forest stewardship to meet landowner expectations, environmental standards and the demands of a public that is often unaware of the forest health benefits of responsible logging. Maine has led the nation in these areas for decades and will continue to do so.

Nowhere is this more evident than in the Northeast Master Logger Certification (NEMLC) program.



NEMLC is a performance-based certification program for logging companies. It was created in 2000 by the Professional Logging Contractors (PLC) of Maine and is now administered by the Trust to Conserve Northeast Forestlands (TCNEF).

The program was the world's first independent third-party certification program for timber harvesting, and the model has proven so successful that it has been adopted in seven Northeast states from Maine to New York, with more than 120 logging companies currently certified. It has also been adapted for use in other parts of the United States and abroad, and the growing demand for certified wood fiber has positioned it to continue expanding.

Master Loggers are audited by independent field verifiers every four years and the program is audited yearly by NEPCON of Vermont under the SMARTLOGGING certificate. The program benefits forest health, the forest economy, and landowners because it ensures certified loggers are maintaining the highest standards of professionalism and forest stewardship in the industry today.

In September 2020, TCNEF was elected to the FSC US Board of Directors. This is the first time in 26 years that a group representing logging contractors has been elected to this board, sitting with representatives from groups and companies as diverse as the World Wildlife Federation and International Paper. FSC has a major impact on forest economies and timber operations - most large landowners in the Northeast and almost all large mills have adopted the FSC standard. TCNEF intends to use this role to represent the interests of the small logging businesses doing the work on the ground while sharing the valuable perspective of loggers in FSC's continued efforts to promote responsible forest management.

Over the last 20 years, TCNEF has worked to ensure there are strong benefits for Maine companies certified to the Master Logger standard, including:

- Discounted Workers' Compensation (WC) rates: Master Logger companies receive a roughly 50% discount on WC rates for their employees.
- Access to the Maine Department of Environmental Protection/Maine Bond Bank/Maine Forest Service DirectLink Loan Program: A low-interest loan program for new and used logging equipment.
- Extra points on Inland Fisheries and Wildlife Bid Sales: 10 points are given to Master Loggers when calculating bid scores.
- Low-cost or free continuing education training: Master Loggers are provided with free training to help them meet their professional goals.

As Maine's forest economy evolves and the expectations of the loggers who supply the raw material for it rise, increased professionalism is key to meeting those expectations. The Master Logger program offers a way to certify that professionalism and raise the standards for the entire industry in the process.

THE FUTURE

By Dana Doran, Executive Director of the Professional Logging Contractors of Maine



This study demonstrates the vast impact logging and trucking have on the Maine economy and highlights their role as the foundation of the state's entire \$7.7 billion forest products industry. It also shows what Maine stands to lose if the mounting challenges to logging and trucking are not overcome.

Shortly after this study was released, Maine's loggers and truckers were thrown into an unprecedented crisis by the effects of the COVID-19 pandemic and the loss of key mills and markets. These effects are ongoing and severe.

The federal response to that crisis has also revealed deep and unacceptable inequities in how loggers are treated and viewed in comparison with farmers. Though loggers are "farmers of the forest" harvesting a renewable and critical crop, wood fiber, farmers received billions in aid to offset losses in the pandemic while loggers received no direct aid.

This study also comes in the wake of a 2019 "Maine

Logger and Log Trucker Employment Availability and Wage Analysis Report" prepared by the Maine Center for Business and Economic Research at the University of Southern Maine that found Maine is facing a shortage of loggers and log truckers that will grow and which could hinder the growth of the forest products industry in the state if wage growth does not occur.

The inevitable conclusion based on a review of the new study, the wage and employment analysis released previously, and the unequal treatment of logging in comparison with other traditional resource industries like farming is that logging is a critical Maine industry under severe threat that must be preserved if the state is to avoid a collapse of its forest products industry and the deep and irreversible impacts that would have on Maine's economy, rural communities, and character.

The challenges facing loggers and truckers are not insurmountable, but failure to overcome them would be disastrous for Maine.

MAINE LOGGING & TRUCKING

Economic Impact 2017

Employed
3,954
Workers



Created An
Additional
5,412
Indirect
Jobs

State & Local
Taxes Paid:
\$25 million



Supported
Maine's
\$7.7 Billion
Forest
Products
Economy

Labor
Income
Generated
Exceeded
\$340 Million



Workers
Earned An
Average Of
\$47,289
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Maine Logging & Trucking Contributed

\$619 MILLION

To The State's Economy