



Industry News

■ **Scientists discover attacking fungi that show promise against emerald ash borer**

(March 10th)

Since its introduction, the emerald ash borer (EAB) has become the most devastating invasive forest insect in the US, killing hundreds of millions of ash trees at a cost of hundreds of millions of dollars. Researchers have identified various fungi living in EAB-infested trees—a critical first step in finding fungi that may be harnessed to control the spread of EAB.

— *Phys.org*

■ **As Maine forest products initiative advances, workforce shortage remains an issue**

(April 5th)

The Forest Opportunity Roadmap/Maine initiative aims to set the market up to weather economic ups and downs, and build an industry and workforce that takes advantage of Maine's rich forests. The issue for Maine's forest product industry after a year of a pandemic economy is one it faced before the pandemic - finding the workforce to cut down, haul and manage the timber and the products it produces.

— *Maine Biz*

■ **Spike in lumber prices hasn't trickled down to the region's timber producers yet**

(April 10th)

With lumber prices going through the roof from demand driven by pandemic changes, it seems like forest-filled New Hampshire should be reaping a windfall. But issues from global supply chain quirks to manpower limits to tree-species distribution means the benefit so far has been spotty at best, especially for landowners.

— *Valley News*

Industry Overview

Forestland Operations

The abrupt end of winter at the conclusion of the first quarter of 2021 caused some unexpected scrambling this year in the forests of the northeast. Most foresters have enough experience to plan ahead so that when the steady rhythm of winter harvest operations is interrupted by Mother Nature, timber is piled in locations convenient to access once the forest starts to dry out. Consequently, landowners had higher than normal inventories left roadside which could not be delivered to markets until early June in some locations.



With the summer season now in full swing, a new section of forest road is being constructed and prepared for use.

The startup to summer operations this year has been marked by generally dry conditions, and only light & occasional rainfall. This has helped facilitate the movement of forest products as production ramped up again. We were initially concerned about elevated fire risk given the dry temperatures, but that concern has faded. During springtime the autumn leaf litter is fully exposed to direct sunlight and can act as tinder, so the chance of ignition is highest. When the leaves come out and the canopy closes in, the shade holds the moisture down and the risk goes down dramatically. When fires do happen to ignite, they are contained and attended to very quickly - regardless, we were on watch this past quarter.

The logistics of transporting timber has been strained in recent quarters due to a shortage of trucking capacity in the system. Many truckers have alternative options other than hauling timber down forest roads, which are private and occasionally poorly maintained. Rough roads can cause excessive wear & tear on trucks which leads to expensive maintenance & repairs for the owner. Downtime caused by repairs is expensive for everyone; therefore, we try to keep roads well maintained and keep our hauls as short as possible.

The cost of transporting forest products is also tied to the cost of diesel fuel, which has been on a consistent rise as the economy emerges from the COVID-19 pandemic. Despite the fact that New England diesel was trading at its three-year low only 7 months ago, we are now approaching the three-year high point. This index also helps us understand the costs borne by our logging contractors and truckers. When fuel costs get high enough, we opt to pay a premium to help them offset these costs and ensure they can continue to work - if the fuel prices continue on their current trend, we will soon hit that trigger point.

NUMBER 2 DIESEL FUEL PRICES - NEW ENGLAND

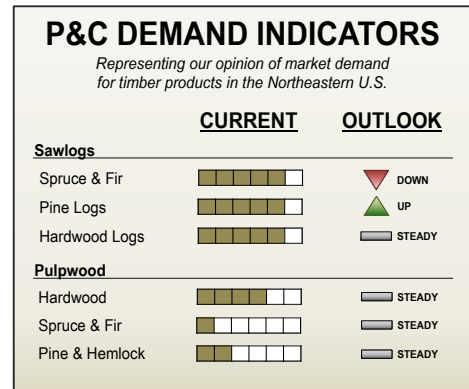
3 YEAR HISTORICAL MONTHLY AVERAGES



Now with summer coming into full swing, our forest activities are going well, the winter wood left roadside is nearly all cleaned up, and we are operating according to our plan. The wildcard this year is no different than it has been in the last several years -- the markets that we sell our timber into.

Forest Products Markets

In this newsletter, we tend to focus on two matters that greatly affect landowners -- the weather and the timber markets -- over which landowners have no meaningful control. It's no shock to anyone who has been a regular reader that the volatility in the timber markets has been as rampant as the weather, and indeed has been one of its defining characteristics.



When considering what to write here, I walk the thin line between analyzing market conditions and making predictions about the future. We've been feeling optimistic about the future for forest products for some time, but the ride sure has been bumpy.

Building products derived from forest products have been surging over the past several quarters, and although there has been some significant retraction on prices for staple products, regional

demand remains very healthy. Despite the fluctuations, we believe the economic recovery that appears to be underway is a very good underlying condition for forest products to thrive.

Pulpwood Products

Demand in the regional hardwood pulpwood markets today is a good deal stronger than it was six months ago. Mills are making sure they have plenty of raw materials in their stores, and the chip piles that feed the pulping process are turning over frequently despite the fact that there have been a series of mechanical challenges that have affected production at some regional facilities. Hardwood raw material inventories appear relatively high in the region, but sourcing is strong and mills are hungry.

In some years past, pulp mills employed a network of wood yards in order to draw in pulpwood from regions distant to the mill. Because of the handling and transportation costs involved with satellite wood yards, local fiber is the least expensive for any pulp mill to acquire. Therefore, when mills aspire to manage their raw material costs, the most distant pulpwood is the first to get shut off. This year, we've seen mills work to reduce their dependence on this extended sourcing network, and instead attempt to rely more on local supplies. Mills only reach outside their circle when they must, which makes it difficult for landowners to sell pulpwood from regions that are at the furthest reaches of the mills.

Although it is not often thought of as "pulpwood", the material consumed at facilities producing engineered forest products such as OSB and engineered lumber meets the same specifications as pulpwood, and therefore these manufacturers often compete for the same supply. These manufacturers have been riding the current building products wave, and are therefore working hard to maximize production, run as many



■ **Lumber prices soar, but logs are still dirt cheap** (April 20th)

An abundance of harvest-ready trees has kept stumpage fees extremely low. Lower stumpage fees are beefing up profits for sawmills as a frenzy for home-renovation and building has sparked an unprecedented surge in demand for lumber. Lumber futures have surged more than 60% to record highs this year, and analysts aren't expecting any relief until late 2021.

— Bloomberg

■ **Paper mills to close as Covid-19 accelerates plunge in demand** (April 20th)

Stora Enso plans to close two paper mills in Finland and Sweden amid a rapid drop in demand accelerated by the Covid-19 pandemic. Stora Enso said the coronavirus pandemic had sped up the shift in consumer behavior, leading to significant overcapacity in Europe and low prices and struggling mills. Both the Finnish and Swedish mills were lossmaking with little prospect of improvement in the future.

— FT.com

■ **ND Paper will recycle paper to produce pulp at Old Town mill, adding 20 jobs** (April 22nd)

ND Paper will expand pulp manufacturing in Old Town with the addition of a production line that recycles paper. The line will employ 20 new workers. The company said the operation is now starting up and will soon produce 200 metric tons of unbleached pulp per day from regionally sourced scrap paper, such as corrugated cardboard boxes.

— Maine Biz

■ **U.S. trade chief pressured to lift duties on Canadian lumber** (May 16th)

Shortages of softwood lumber amid soaring U.S. housing demand and mill production curtailed by the COVID-19 pandemic have caused prices to triple in the past year, adding \$36,000 to the average cost of a new single-family home. Republican lawmakers have taken up the builders' cause, asking Congress to eliminate the 9% tariff on Canadian softwood lumber imports.

— Reuters

shifts as possible, and stay active in the timber marketplace. Although these facilities consume mostly poplar, which only represents 5-8% of the normal hardwood mix, the current demand has landowners favoring the species. This is possible as poplar often grows in pockets, which means it can be targeted relatively easily while working around other hardwood species.

Softwood pulp markets have been active as well, but landowners who want to sell their softwood pulpwood take second fiddle to the abundant supply of spruce & fir chips that are currently being produced at regional sawmills. We are able to move some of the material, but until production slows at sawmills, the spruce & fir pulpwood market will remain lukewarm for landowners. The new Nine Dragons mill in Old Town is unique in that a meaningful amount of its consumption is hemlock. Hemlock, another softwood species, has been historically difficult for landowners to sell, and because of the way it grows, the majority of any given hemlock tree ends up being pulpwood. However, pulp mills are getting better at consuming this species and that is creating an opportunity for landowners to sell more of it.

Sawn Products

Softwood Sawstock

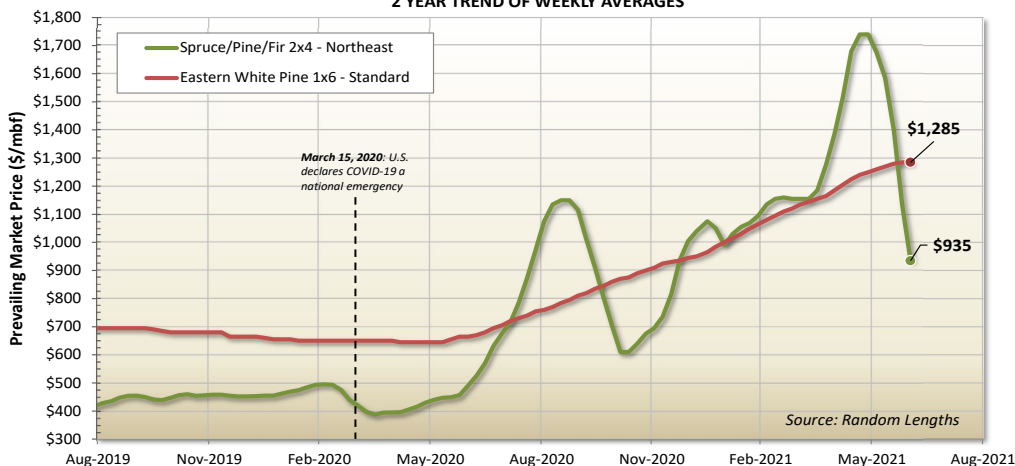
Because the majority of softwood sawn products eventually find their way into a home, the residential housing market is a strong leading indicator of how the softwood lumber market will fare. In fact, the cycle of demand in the forest products industry generally mirrors that required for the construction of a house. In the initial framing of a house, dimension lumber is used to provide structure. Then, structural panels provide the floor and sheathing. Next pine provides the trim and millwork, followed by hardwood in the floors and cabinetry, and finally the exterior siding products like cedar shingles. Demand at sawmills

during an economic upswing follows this pattern almost exactly - demand is led by dimension lumber mills, then OSB plants, then hardwood & pine sawmills, and finally demand finds its way to cedar mills.

Nearly everyone has seen the dramatic rise in the price of softwood lumber in the last six months as demand for building products soared. In three months, the price of a 2-by-4 delivered to Boston rose 55% to an all-time high, then fell that same amount. But demand is only half the story, and it would be a mistake to think that rising lumber costs is some sort of bellwether for surging inflation. Between fires in the west, significant changes in harvest levels in western Canada, shutdowns related to COVID-19 and subsequent challenges with rehiring and restarting, the supply of lumber to the market has been stressed in the past year unlike any other. Now that production is ramping back up, the supplies are there to match demand and price is falling. It's been jarring to have a commodity market this large make such dramatic swings in such a short period. However, if the economic picture plays out the way most people are predicting, lumber prices are likely to settle above their pre-pandemic levels. Either way, softwood sawmills are certainly healthier now than they have been in a while, which is a really good thing for landowners.

During this runup in lumber prices, I was often asked when landowners can expect to see sawlog stumpage prices spike. While we have seen gains on log prices, it's not been nearly to the same extent that people read about in the news. This should once again serve as a reminder to landowners that log prices and lumber prices are only remotely connected to each other. Because of the value added in lumber, it can be transported long distances - nationally and even internationally. It is also something that is traded, intermediated,

PRICE TRENDS IN SOFTWOOD LUMBER
2 YEAR TREND OF WEEKLY AVERAGES



■ **East Millinocket biochar production plant gets \$800K boost from FAME** (May 25th)

The FAME has approved an \$800,000 Direct Loan to Standard Biocarbon Corp., to help pay for equipment for the company's biochar operation at the former East Millinocket mill, pending approval of financing from other agencies. SBC, the anchor tenant of the new town-owned innovation campus, will use the loan to buy two kilns that will be used to produce biochar, which is a carbon substance produced when organic matter is decomposed thermally in an oxygen-starved chamber, a process called pyrolysis.

— *Maine Biz*

■ **Embodying the case for wood** (June 1st)

Using timber structural systems, such as timber frame or cross-laminated timber, can reduce the embodied carbon emissions of a new building by around 20 - 60% per building. These systems also deliver the benefits of modern methods of construction, helping to reduce build time, reduce waste, improve safety and cause less disruption in the local area.

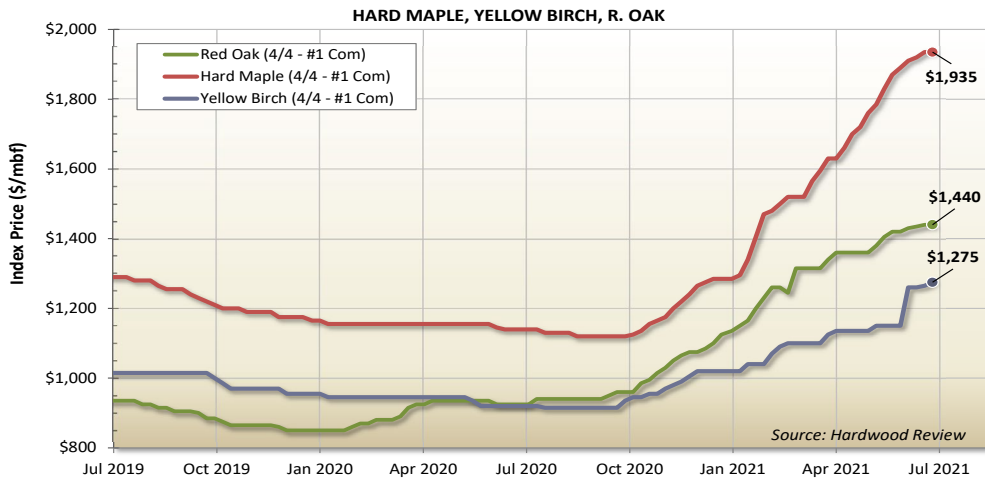
— *Politics Home*

■ **Former Millinocket paper mill site will host \$300 million data center** (June 5th)

Nautilus Data Technologies plans to bring a \$300 million data center to the mostly empty Millinocket site of what was once the world's largest paper mill, marking the first new industrial tenant on the property since papermaking stopped in 2008. The first phase of the project is set to begin operating by the end of 2022 and could bring up to 30 jobs to the area.

— *Bangor Daily News*

RECENT PRICES IN HARDWOOD LUMBER - NORTHEAST



and hedged on commodity markets. Contrast this with logs, which are transported only into regional markets, and must be manually weighed or scaled in order to determine their value. Lumber and logs are exposed to very different marketplaces and therefore only maintain a loose connection. Regionally in the northeast, there is a large supply of sawlogs for mills to consume, so mills did not need to increase their price for logs as quickly. However, we have seen sawmills share some of the upside with landowners -- the price we are getting for spruce & fir logs is up some 20% depending on the mill and region. This will not hold forever, particularly as lumber prices fall, but sawmills remain fairly optimistic.

Hardwood Logs

Once more, it would seem a rising tide lifts all boats. During the past quarter, there has been a singularly upward trend in the prices of almost every hardwood log species.

The whiplash has been almost as dramatic for hardwood lumber mills as it has been for softwood lumber mills. Just a year ago, demand for hardwood lumber was feeble at best and mills were struggling with the prices they were getting. Now mills are sold out 4 months ahead, and lumber prices are rising in large part due to the domestic economic recovery. Hard maple, which is the primary hardwood species in the Northeast and used widely in cabinetry, flooring, and furniture, has been leading the charge. Soft maple, which is occasionally used as a substitute for hard maple, has been seeing an upswing in price as well.

In contrast to softwood, hardwood log prices tend to respond more quickly to changes in the lumber markets, and that pattern has played out during this cycle. Because hardwood sawmills don't produce anywhere near the volume as their softwood colleagues, they carry significantly less inventory and therefore must respond quicker to changes in spot prices. As the hardwood lumber price has risen, landowners have been able to capture more of the upside than they have in softwood. Of course, that same mechanic applies when lumber prices fall as well.

Demand for lower grade industrial logs has not slowed in the region, boosted by increased infrastructure spending and some large projects looming on the horizon. Prices are as high as we have seen them, and in many cases can exceed that of higher grade logs.

Summary

Depending on which side you are on, the rising prices may leave you either frustrated or elated, but as you have seen, the story behind the scenes is much more nuanced. We believe the outlook for building products will stay positive for the foreseeable future. While the prices may fluctuate and the day-to-day volatility is sometimes confounding for landowners, we believe the fundamentals are there for strong demand as things settle back to normal and the economic recovery continues. 🌲

Benjamin D. Carlisle
PRESIDENT



LANDOWNER
update

2nd Quarter 2021

- **Tennessee manufacturer breaks ground on \$150M conversion of New Limerick mill** (June 8th)

Engineered wood manufacturer Louisiana-Pacific Corp. will break ground Tuesday on a \$150 million conversion of its mill in New Limerick to turn out the company's flagship siding and trim product. The conversion aims to supply growing demand for LP's flagship products and better penetrate the new home construction and repair and remodel markets along the East Coast.

— *Maine Biz*

- **Maine working forest projects slated for \$16M in federal outdoors act money.** (June 8th)

Two Maine working forest projects are slated to get around \$16 million in federal money for the 2022 fiscal year through the Great American Outdoors Act. The funding is through the Forest Legacy Program of the Great American Outdoors Act, which calls for \$9.5 billion over five years for federal land maintenance and to fully fund the Land and Water Conservation Fund.

— *Maine Biz*

- **Lumber prices post biggest-ever weekly drop with buyers balking** (June 11th)

Lumber futures posted their biggest-ever weekly loss, extending a tumble from all-time highs reached last month as sawmills ramp up output and buyers hold off on purchases. Prices in Chicago fell 18% this week, the biggest decline for most-active futures in records going back to 1986. Lumber has now dropped almost 40% from the record high reached on May 10. Buyers are balking at still historically elevated prices and awaiting additional supplies, setting off a cascading sell-off, analysts said.

— *Yahoo Finance*

©2021 by **Prentiss & Carlisle**. Reproduction of this report by any means in whole or in part without express permission of the authors is a violation of federal law.

Please note: This report is intended to be an unbiased and accurate source of information on timber markets and timberland investments. However, timber market conditions and the forest products industry vary greatly within and across regions and depend on a substantial number of factors that this publication does not cover. Therefore, anyone using information published in this report for any specific purpose, sale or contract does so at his or her own risk. Information included in this report and provided by other sources is believed to be reliable and accurate. Prentiss & Carlisle assumes no responsibility for errors or omissions.