



Industry News

■ ***"Liquid wood" maker hopes to open East Millinocket biorefinery in 2 years (October 10th)***

Ensyn Fuels Inc., an Ottawa-based company, intends to produce low-carbon heating fuel from wood chips, likely within the next two years. If the company receives its remaining permit, it plans to lease and start construction on a portion of the former mill site to produce the liquid fuel. The cleaner alternative to natural gas can be used to heat large buildings looking to reduce their carbon emissions.

— *Bangor Daily News*

■ ***LP Houlton announces major expansion of New Limerick mill (November 2nd)***

Louisiana-Pacific Houlton is starting a \$400 million expansion to its New Limerick plant to double the production capacity of SmartSide Siding and Trim, which is engineered wood strand technology that protects against hail, wind, moisture, fungal decay and termites. The new expansion will add approximately 100 new jobs to the existing 160 jobs.

— *Bangor Daily News*

■ ***Carbon offsets: a controversial tool that's helping to protect Maine's forests (November 3rd)***

There are now more than a dozen carbon offset projects in various stages of development across Maine, but their impact has so far been limited. Only 3.4% of Maine's forestland — about 600,000 acres — is now being managed for offsets. The projects are scattered across the state's northernmost counties, with many in Washington, Aroostook, Piscataquis and Somerset counties. And few have generated credits so far.

— *MainePublic*

Industry Overview

Forestland Operations

Every once in a while, I am reminded just how valuable advance planning and preparation really is. This is particularly true in environments where conditions can suddenly change and are out of your control. The biggest obstacle during the fourth quarter this year was Mother Nature - with the weather that prevailed in the Northeast, our advance work during the earlier parts of the year really paid off.



Fall mist settles in the forest valleys outside of Ashland, Maine.

In order for forest operations to get into full swing during this time, the region needs cold weather to harden the forest road systems and allow trucking to our mills. This season, there have been precious few stretches of cold punctuated by days of warmth. As a result, there has been very little momentum built during the months of November and December, and here in early January most areas in the region have still not frozen in. Thankfully, earlier in the year the weather was quite cooperative, so we started early and strong, and set ourselves up to meet our plans.

As it stands now, there is a lot of timber laying in the woods, processed and just waiting to be hauled once the roads can withstand active trucking. That couldn't come soon enough for our regional mills, which are anxious for feedstock, and for a contractor force that gets paid only after timber is delivered.

Harvesting costs remain elevated, and the labor shortage facing any service-based business these days is particularly apparent in the logging sector. The high costs of entry, difficult work hours, and training needed make it difficult to recruit new professionals into this line of work.

NUMBER 2 DIESEL FUEL PRICES - NEW ENGLAND

3 YEAR HISTORICAL MONTHLY AVERAGES



As a result, both workers and equipment are aging. There has been a reduction in the total available workforce as retirements occur and as workers find alternative industries. This is not a regional problem - landowners are grappling with this everywhere, and pay rates are rising in order to try to stem the tide. The most recent trigger has been the rising cost of diesel fuel, which is now showing signs of coming down from a peak, but still is painfully elevated..

Forest Products Markets

The thin raw material inventories at most markets reflect the difficulty in getting cut timber to market. This is normally the time when timber deliveries are ramping up for the winter. However, with the warm weather during the fourth quarter and the difficulty in the contractor labor market, the cadence of deliveries is not at the pace it usually is. This has left inventories generally thin throughout the region and built up some anxiety in the larger-volume consumers.

There are some signs of slowdown in the demand for some forest products as

end user markets - particularly home construction - weaken. However, given the supply dynamics of forest products from the woods, timber prices have been so far insulated.

Pulpwood Products

The market demand for hardwood pulpwood was recently described to me as a "feeding frenzy." While those words feel a little more cutthroat than how I might characterize it, there is little doubt that there is currently not enough pulpwood being produced to satisfy all the consumption. Even if the region had the logging horsepower that it did several years ago, it feels as though mills still would not be receiving adequate supplies. As a result, pulp mills are expanding their range as far as they can and using concentration yards to keep wood flowing. While these strategies come at an extra cost, the consensus is that they can currently afford it.

There has also been a noticeable increase in hardwood pulp mills augmenting their fiber supply with softwood species - which many do not traditionally consume. But lack of available hardwood and the high sourcing costs involved have led them to seek the lower-cost alternative when they can. This is a win for everyone - mills get more affordable feedstock, loggers & truckers stay busy and closer to home, and landowners can generate a return while applying the best possible forestry.

Of course, fiber is only one input for a pulp mill, and for a while now, pulp producers have been battling a series of



LANDOWNER
update
4th Quarter 2022

In Maine, mass timber seen as a climate solution and an economic opportunity (November 10th)

As the engineered wood material called mass timber gains traction in Maine, supporters believe it could both help lower carbon emissions from new buildings and galvanize the growth of the state's forestry industry. Many also hope that Maine could become a producer as well as a consumer of mass timber, helping to bolster the state's forest products sector.

— Energy News Network

Sappi Announces \$418 Million Paper Machine Rebuild at its Somerset Mill in Skowhegan, Maine (November 10th)

Sappi North America announced the approval of a \$418 million capital project to convert Paper Machine No. 2 at its Somerset Mill in Skowhegan, Maine, to increase its capacity and produce solid bleached sulfate board (SBS) products. Demand for packaging and specialty papers in North America is particularly robust, especially since SBS is a more environmentally sustainable alternative to plastic packaging.

— PaperAge

Company proposes \$4 billion aviation fuel facility at Loring Air Force Base (November 15th)

Washington, D.C. based DG Fuels chose Limestone as one of two locations for facilities that will produce 175 million gallons of sustainable aviation fuel per year. DG plans to use local timber waste products to extract carbon dioxide from biomass and derive hydrogen from a process called water electrolysis, creating fuel that will remove 1.5 million tons of carbon dioxide from the atmosphere annually.

— Bangor Daily News

P&C DEMAND INDICATORS

Representing our opinion of market demand for timber products in the Northeastern U.S.

CURRENT

OUTLOOK

Sawlogs

Spruce & Fir	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div> DOWN
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Pulpwood

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rail and trucking shortages that have constrained their own supply chain and raised the cost of production. The same shortage has created headaches for the delivery of finished pulp from the mills to their markets. The situation appears to be improving as pressure from other industries loosens.

Several sizable expansion projects have been announced at two regional hardwood pulpwood consumers; the Sappi pulp mill in Hinckley, ME and the Louisiana Pacific mill in New Limerick, ME have each recently committed to capital investments of approximately \$400mm. This signals not only a commitment to the region but also confidence in the longevity of their markets.

Demand for other softwood pulpwood products - notably pine & hemlock - is improving as the primary consumer of those products resumes from a lengthy scheduled shutdown. Raw material pricing of these products has also increased slightly through the quarter.

Sawn Products

Softwood Sawstock

Looking at spruce & fir lumber prices over the last decade, the period during the COVID pandemic stands out like a sore thumb. During the decade leading up to the pandemic, the median price of a 2x4 delivered to Boston was \$400 per thousand board feet, and, except for some short-lived spikes, the

price was fairly consistent. During the pandemic, however, supply shortages and sudden demand caused shocks that brought unprecedented volatility. This unpredictable pricing was unsettling to say the least. With all the uncertainty, mills have been less willing to take risks and make purchase commitments extending out long periods.

For the time being, a more recent calm has settled into the marketplace, and dimension lumber pricing has declined now to almost exactly where it was prior to the pandemic. Spruce & fir sawlog prices, however, remain approximately 40% higher than pre-pandemic levels. Mills are concerned that dropping the price may lead to suppliers going elsewhere with the wood, but at some point the squeeze becomes too much and a price correction will become necessary.

In spite of what is going on with spruce & fir, demand for white pine logs is every bit as strong as it has ever been. Logs are still in record territory, and pine lumber prices have only dropped a hair. Because of its smaller size and regional concentration in the northeast, this market has always been less volatile than the structural lumber market. Pine sawmills are running well and consuming as much as they can, and mills are easily able to unload their residual shavings and chips.

The market for cedar logs is as much of a feeding frenzy as hardwood pulpwood. It feels like everybody wants it and nobody



■ **Wood-pellet mill, rail connection planned for Millinocket** (November 21st)

The site of the former Great Northern paper mill in Millinocket could get new life producing industrial-grade wood pellets that would be sent by rail to Searsport for shipment and sale overseas. If developed as planned, the One North FPC plant would become Maine's first facility to export wood pellets, which are burned in Europe and Asia as an energy source with less climate-changing emissions than coal and fossil fuels.

— *Press Herald*

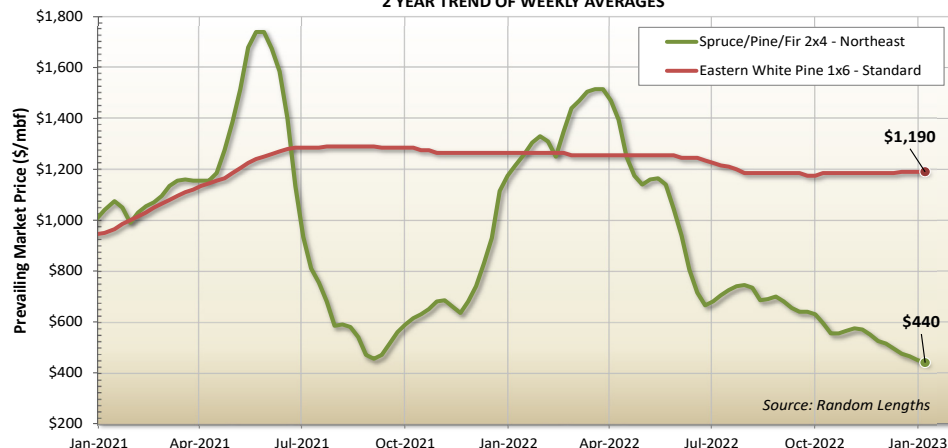
■ **Judge orders Maine biomass company in bankruptcy to sell assets to pay off debts** (November 28th)

Stored Solar, LLC, will lose all its facilities in Maine, Massachusetts and New Hampshire after a judge approved a sale of the company's assets to Hartree Biomass Holdco LLC. However, only the company's creditors whose claims are secured by company property are likely to benefit from the sale, Hartree being the company's largest creditor. That would leave a wide range of entities, including dozens of loggers, unpaid.

— *Bangor Daily News*

PRICE TRENDS IN SOFTWOOD LUMBER

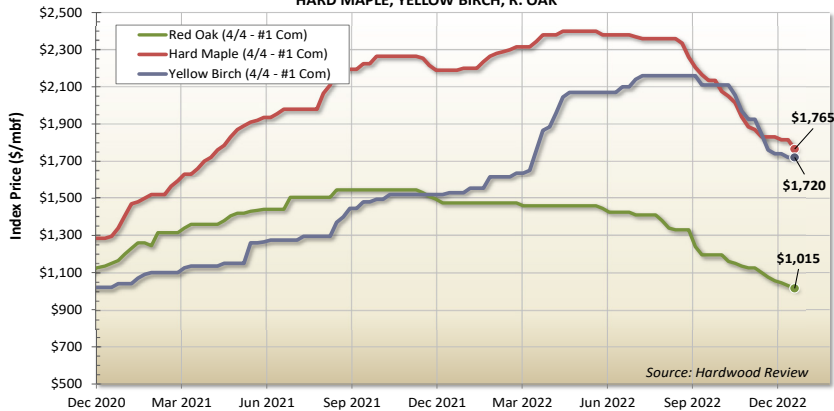
2 YEAR TREND OF WEEKLY AVERAGES





RECENT PRICES IN HARDWOOD LUMBER - NORTHEAST

HARD MAPLE, YELLOW BIRCH, R. OAK



has it. Much of this is weather related; cedar grows in wetter ground conditions and is often only harvested at scale when the ground is frozen enough to do so. Last year's winter ended sooner than expected, leaving the cedar market undersupplied in 2022. Moreover, winter this year has not yet shown any sign of its arrival. Accordingly, the market appetite for cedar is considerable.

Hardwood Logs

The hardwood lumber market has eased significantly over the past six months. However, much like the spruce & fir mills, hardwood grade mills in the region have been reluctant to make log price adjustments for fear their supply may run dry. We do expect hardwood log prices to adjust in the coming quarters as this plays out. Sawmills still appear to be able to move their finished goods despite the prices abating. In the northeast, many hardwood sawmills sell their product into more niche markets that are less volatile, but they are subject to the same macroeconomic forces as everyone else.

The wild demand for hardwood pulpwood has been a huge boon to our regional hardwood sawmills' timber supply for the last several quarters.

Good pulp markets serve to open up areas where landowners could not harvest a lot of hardwood because of its distance to the mill and the relative value of pulpwood. Many of these areas were passed by in years past. However, now that the pulpwood can be economically sold, stands with hardwood sawlogs can also be accessed with little to no incremental road cost. Landowners, including ourselves, have taken advantage of this situation and kept sawmills well supplied.

Demand for low-quality industrial logs – used in pallets and in crane mats – is also still strong, boosted by shipping and infrastructure work. As it stands now, there is no sign of the economic slowdown affecting either of these products, but it bears watching.

Biomass

Prices of electricity and natural gas have many larger mills desiring to use biomass (which primarily take the form of tree tops and limbs) to heat and power their facilities. Pricing is higher than it has been in recent years, but the market faces significant barriers to becoming a reliable energy alternative. Rather than sell residual tops and limbs into the market, most industrial landowners bring that material back into the forest in

order to stabilize the ground from equipment and erosion. Given the wet conditions, virtually nobody is selling biomass straight from the forest right now. If the weather gets colder and the ground needs less stabilizing material, there is a chance some will be produced for the marketplace.

Summary

At the end of last quarter's newsletter, I speculated whether or not timber suppliers would be able to keep up with the demand for forest products. Given the constraints of the prevailing weather conditions and the difficulty in finding qualified labor, the answer – at least for the time being – appears to be a solid “no”. If you are a mill, you are watching your inventory like a hawk. If you are a logger, you are eagerly trying to find ways to keep crews busy as you wait for things to freeze. If you are a landowner, you're realizing the importance of planning ahead. Suffice it to say, the pressure to perform these days is not being lost on anyone. 🌲

Benjamin D. Carlisle
PRESIDENT

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