Prentiss & Carlisle

LANDOWNER update

1st Quarter 2022

Industry News

- ***Maine forests at risk after discovery of southern pine beetle in York County***
(January 10th)

  One of the most destructive forest pests in the Southeast has made its way to Maine. The southern pine beetle, which has destroyed millions of acres of pine forests in its native South, was discovered in Waterboro last fall. This highly adapted tree killer prefers the "hard pine" species like red, pitch and jack, and is by nature epidemic.

  — Maine Public

- ***East Millinocket will use $300K grant to help its 1st paper mill tenant get off the ground***
(January 18th)

  The town plans to use a grant from the Future Forest Economy Initiative for a heating system and engineering at the mill's warehouse that will help the building's first tenant get off the ground and make the building more hospitable for future tenants. The building's first tenant, Biocarbon Standard, takes wood chips and turns them into a carbon-rich soil additive called biochar that reduces the need for traditional fertilizers.

  — Bangor Daily News

- ***Lumber rebound awakens timber market from long slumber***
(January 20th)

  Record lumber prices and cardboard production are starting to lift southern timber prices from their yearslong slump. Analysts, foresters, and timberland owners

Cont'd...

Industry Overview

Forestland Operations

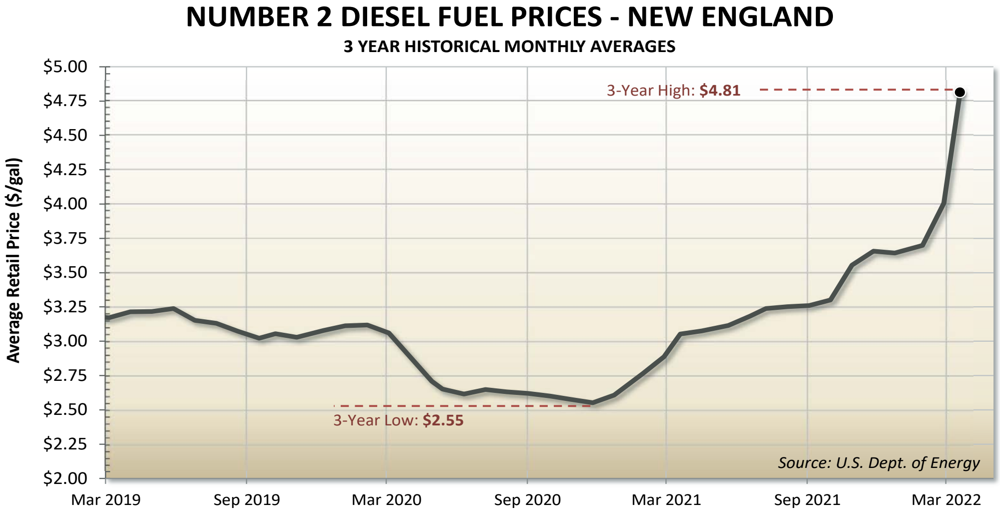
Well, Puxatawney Phil sure got this one wrong. The famed groundhog may have seen his shadow this year, but the predicted extra six weeks of winter proved elusive in the forests of the Northeast. This year, not only did the end of winter happen earlier than usual, it happened incredibly quickly.

Seed cones adorn a eastern spruce tree during the winter of 2022.

As the weather warmed and the roads began to get soft, the pressure to complete jobs and get timber delivered ratcheted up so that everyone felt it. By the beginning of March, the abrupt changes in weather caused activity in the southern areas to slow or even halt entirely. As much as possible, our effort shifted from harvesting to making sure timber we had already cut was placed in dryer areas that could be trucked to the mill. Everyone in the woods business knows that spring will eventually catch up to interfere with our forest operations plans; we navigate that regularly and usually we are able to respond and adapt.

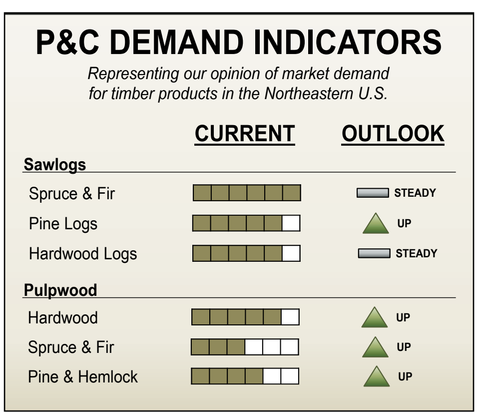
What was different this year was the sheer amount of other challenges our industry was facing concurrently. Disruptions in the supply chain have made it difficult to purchase or even locate replacement parts to harvesting equipment, and this caused an abnormal amount of downtime. Wage rates are suddenly rising everywhere, making it even more difficult to hire qualified loggers. In many rural regions of the northeast, Covid-19 still has a fairly sizable foothold, and this winter many contractors had to regularly deal with operators calling out sick. New equipment prices are higher than they have ever been, forcing loggers to push old equipment longer into their service life.

Moreover, when not dealing with staff shortages or equipment service downtime, loggers have faced a spike in oil prices that has made it much more expensive to operate harvesting equipment and transport timber to the mill. For regular readers of this newsletter, I do not need to emphasize the importance of diesel fuel costs, but it is worth adding that escalating oil prices also increases the price of other consumables such as lubricants and specialized fluids



needed for hydraulic systems. In short, costs to operate equipment spike with fuel prices spike, and we are now at record levels.

When all this collides, right at the abrupt end of a shortened winter operating season, it sure feels like a perfect storm. We know of several regional logging contractors who chose to park their equipment early and regroup rather than continue to operate in such a difficult environment. For those that kept going, we responded quickly and made frequent service rate increases during the quarter to help absorb the impact of increased fuel prices. By the end of the quarter, our service rates were 10-15% higher than 6 months ago, and we continue to take a hard look at further adjustments.



The good news is that the most severe effects have been amplified because of broad economic shocks brought on by Covid-19 and the crisis in Ukraine, and may be temporary. And, for better or worse, our industry has a long history of adapting when it is thrown off balance.

Forest Products Markets

The challenging weather combined with the difficulties faced by our regional logging force have created an environment where mills were under supplied during the winter season. Broadly, there has not been nearly enough timber produced this winter to meet the significant market demand, and nearly everyone is desperate for wood. With the spring mud season looming, the raw material inventories look surprisingly thin.

Natural demand for forest products produced in the region remains elevated, particularly as it relates to those used in building materials. Prices are generally high and wood consumers are monitoring their inflows very carefully to make sure that their supply keeps up with their production.

Pulpwood Products

Hardwood pulpwood consumption continues to be aggressive at every regional facility and inventories are lower than usual as pulp mills scrambled to keep ahead of the changing weather. One significant consumer elected to schedule downtime during the upcoming mud season and tempered their winter purchasing as a result - if that had not been the case, it is likely other mills would have wound up well undersupplied. We also found pulp mills tailoring their species preferences to match the available supply in order to get adequate volume. Several extended their reach in recent months by purchasing timber at a greater distance.

Demand for softwood pulpwood - including pine & hemlock - is quite strong, which is monumentally different from the doldrums of just a few years ago. Although the product

say it is still too early to call an end to the timber bust and recovery is uneven, absent in areas far from mills. But the average price in the South for pine trees used to make lumber hasn't been higher in more than a decade.

— Wall Street Journal

- ***Federal judge halts Maine law that aimed to keep foreign workers from hauling logs*** (February 21st)

A federal judge halted enforcement of a new law that would prevent foreign truck drivers from hauling logs harvested in Maine to other locations in the state. While Judge John A. Woodcock Jr. understood the state's interest in protecting Maine's workers and ensuring that employers do not hire foreign workers when U.S. workers are able and willing to do the job, he said Congress developed the H-2A visa program to deal with that as part of national immigration policy.

— Bangor Daily News

- ***Maine loggers are paying 24% more for goods and services than in 2020, survey shows*** (February 24th)

From machinery to insurance, goods and services for Maine logging companies are costing them 24% more than two years ago. Price increases ranged from 17% more for equipment and truck insurance to a 30% premium for lubricants and film. The inflation far exceeds the average 8.4% rise in costs for American consumers over the same period.

— Maine Biz

cannot be economically transported great distances due to its low value, in most regions we are currently able to sell the softwood pulpwood that we produce at a (smallish) profit. Considering that sawmill residuals make up the lion's share of softwood pulpwood, the fact that landowners are also selling a good amount of roundwood is another indication of the improved consumption at these facilities.

Pulp mills have been particularly tuned into the challenges that the regional logging force is facing. Across the board, pulp mills have provided price adjustments to their suppliers as an attempt to keep the crews whole during a time of increased costs. Today, prices for pulpwood are 10-15% higher as a result. We have passed this on almost entirely to our contracted harvesters through increased service rates.

Sawn Products

Softwood Sawstock

With inventories low and consumption high, demand for spruce & fir timber is currently as strong as it has been. Through the quarter, sawmills adjusted prices upward in order to continue the inflow of wood to their yards. Inventories are both filling and depleting their stocks very quickly and anyone not watching it closely can get caught short with little notice, and there is no bigger wake up call than a few warm spring days in the middle of winter. Now that deliveries have slowed for mud season, mills have begun chewing through what volumes they have accumulated.

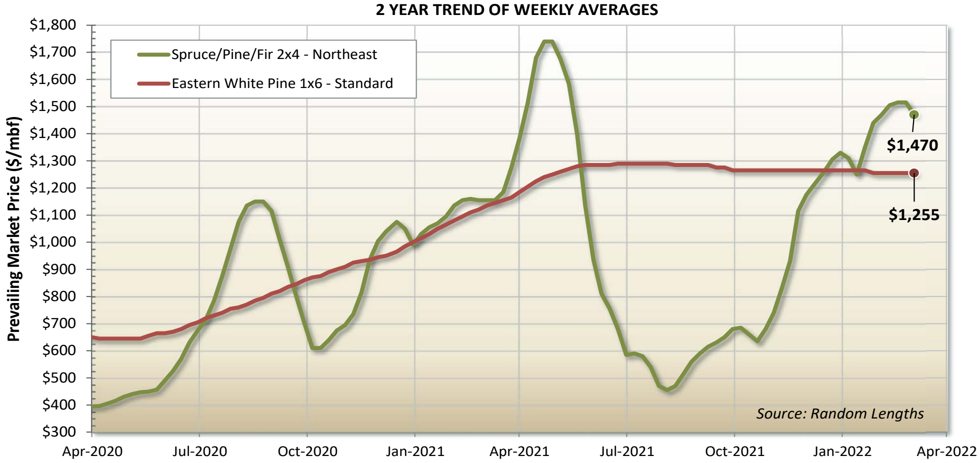
The demand is so elevated we've seen some relaxing of specification preferences at dimension lumber mills. Spruce has long been the favored species over fir due to its significantly faster drying time and the associated lower energy costs needed to produce a board. However, it seemed like sawmills' species preference this winter was directly correlated with the size of their wood pile. When things got slim, mills were okay taking some deliveries of fir. Additionally, lumber mills have been increasingly finding ways to saw shorter lengths and smaller diameters of wood during this unprecedented market upswing. Not only does this allow mills to receive & produce additional volume, it also enables landowners to perform some good quality forest thinnings without breaking the bank.

Pine lumber markets remain strong as well. Although it is a much smaller market than that of spruce & fir structural lumber, landowners in the northeast enjoy solid pine markets and excellent mills. Coming into the winter season, most regional pine mills had very thin log inventories, and strengthened their pricing in order to motivate additional harvests. For the most part, this strategy appears to have worked - pine inventories appear better than they had been.

As forest managers, we often focus on the challenges within the supply chain in our immediate view - the transportation of raw materials from the forest to sawmills. However, the transportation of finished sawn products to end users is an equally critical link. Just as wood suppliers have been struggling to get their wood trucked, sawmills have been challenged with fewer trucks and the competition with other on-road freight. Additionally, much of North American sawn lumber is shipped by rail, and that has seen its own share of bottlenecks.

PRICE TRENDS IN SOFTWOOD LUMBER

2 YEAR TREND OF WEEKLY AVERAGES



- ***MIT team engineers plant-derived composite with potential for stronger, tougher applications***
  (March 4th)

  A team from MIT has engineered a composite made mostly from cellulose nanocrystals (CNCs) mixed with a bit of synthetic polymer. The researchers found the cellulose-based composite is stronger and tougher than some types of bone, and harder than typical aluminum alloys, such as Kevlar.

  — Composites World

- ***Maine awards $6M in pandemic relief to forest products businesses***
  (March 9th)

  Hundreds of Maine logging, timber trucking and other forest products companies harmed by the pandemic are in line to receive $6 million in grants from the state, Gov. Janet Mills announced.

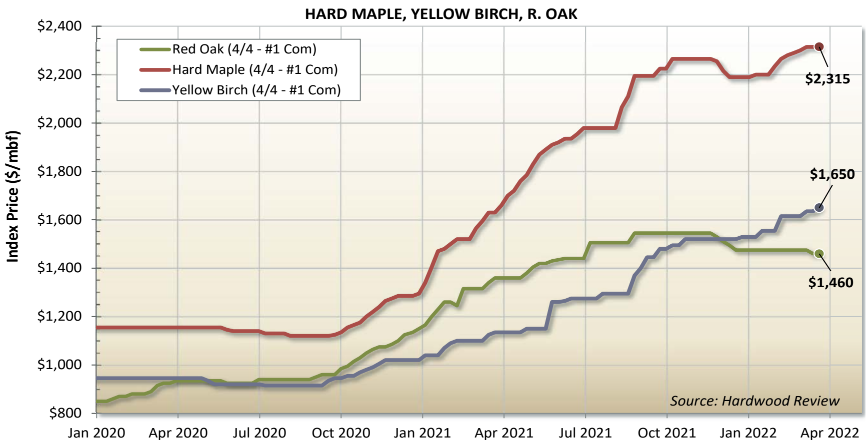
  — MaineBiz

- ***A voracious insect is coming back, but WWII planes won't be needed to fight it this time***
  (March 14th)

  The spruce budworm chewed through nearly 136 million acres of spruce and fir in Maine and eastern Canada in the 1970s and 1980s in the largest spruce budworm epidemic ever recorded. The Maine Forest Service launched a massive aerial spraying program from Presque Isle using WWII planes to eradicate the pests. But they proliferate in 30- to 60-year cycles, and experts see signs that budworm damage is on the rise again. Though experts can't say when an outbreak will happen, the strategy to combat it will be on a much smaller scale.

  — Bangor Daily News

RECENT PRICES IN HARDWOOD LUMBER - NORTHEAST



Although the price of lumber has been well above historic norms for several quarters now, markets have shown some signs of slowing very recently. Surging inflation, operating costs, and broad uncertainty appear to be the primary culprits for the caution. Now that we are entering the construction season, we'll get to see if the high prices dampen interest in building & renovations.

Hardwood Logs

Several years ago, exports to Asia and Europe represented a sizable portion of the hardwood log market, but with the tariffs and trade war, combined with significantly higher shipping costs, North America is now processing nearly all hardwood logs domestically. Thankfully, the domestic market has been healthy in almost all species and grades.

Hard maple represents the bulk of hardwood log species produced in northern New England, and demand for this product has been - and remains - elevated. In the first quarter of 2022 pricing was strong and consumption robust. As the price of sawn grade lumber has risen and sawmills aggressively source more logs, the margin between sawlogs and higher-quality veneer logs has grown thinner. This has caused the veneer market to chase these price increases in order to keep their supply intact.

While much of the interest in hardwood lumber is being driven by the consumer sector, the industrial side has been booming as well because of the implementation of large scale infrastructure projects. Construction and maintenance of transmission lines, pipelines, and other infrastructure uses a large amount of timber “mats” to limit ground disturbance in sensitive areas. The logs used to make these mats are slightly lower grade than that used for lumber, but the regional demand for this material has been established for some time. Mat producers are able to pay strong prices for these logs, and the economic wind appears to be blowing into their sails.

The whole industry in the Northeast is well aware of the early presence of the Emerald Ash Borer (EAB) and its looming effects on the future supply of ash logs. The EAB feeds on and eventually kills host ash trees. Since it was first detected in the U.S. in 2002, the EAB has spread quickly and along the way destroyed tens of millions of ash trees. The implications to our forest management tactics are obvious: if we come across a mature stand of ash in the forest, chances are we are taking the opportunity to harvest it now, because we may not get a second chance. Thankfully, current ash markets are healthy and paying excellent prices for the material - but it's likely that in a decade or two ash won't be a measurable component of the northeastern forest.

Summary

Despite a myriad of issues facing our industry related to increased costs, supply shortages, and labor, markets appear to be resilient and demand for forest products strong. Our region has an unique abundance of diverse markets that want our forest products, and as long as we can keep our logging force healthy and operating at capacity, we will remain optimistic in the near and medium term.

Benjamin D. Carlisle
PRESIDENT