Farm Credit East
Economic Trends in the Northeast Forest Industry

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Innovative Natural Resource Solutions LLC

- Founded in 1994
- Offices in New Hampshire and Maine
- Focus at the intersection of forest industry, energy and economic development
- Services include:
  - consulting in renewable energy
  - forest industry consulting
  - advocacy
  - forest certification and sustainability
- Clients from the private, non-profit and government sectors
- Conducted work in all regions of North America
- www.inrsllc.com
Volume and Value to Landowner of Products from a Timber Harvest

Maine, Statewide - 2017

<table>
<thead>
<tr>
<th>Product</th>
<th>Volume</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>23%</td>
<td>5%</td>
</tr>
<tr>
<td>Pulpwood</td>
<td>51%</td>
<td>31%</td>
</tr>
<tr>
<td>Sawlogs</td>
<td>26%</td>
<td>64%</td>
</tr>
</tbody>
</table>

*Note*: The product mix can change region to region, but the take-away message doesn’t
Housing Starts (past 30 years)
Housing Starts (past 5 years)
Lumber Markets

http://markets.businessinsider.com/commodities/lumber-price
Lumber in the Time of COVID-19 (slide 1 of 2)

- Forest Industry deemed an essential industry (almost all states)
- Building (and re-modelling, particularly outdoor) allowed in most states
  - Housing starts way down
  - Home sales slowed, but still happening (March 2020 – may have dropped as lockdown continues)
- Home repair / re-modelling is way up
  - Home centers reporting record demand (in small quantities)
- Some mills taking extended downtime because of market conditions (mostly in other regions of the country)
Lumber in the Time of COVID-19 (slide 2 of 2)

• Sawmills in the northeast have, so far, been operating close to what they normally would in spring/mud season
• Softwood mills close to normal so far but demand for their lumber starting to show signs of softening
• **Large inventory of logs and lumber signals tough times ahead**
• Building permit backup a problem in the making
• Hardwood mills with export markets have done pretty well and that likely to continue as workers back in mills in Asia
• Log prices have softened during this whole period, partly from normal spring/mud season and partially from pandemic effects.
• We will know a lot more by end of summer on the solid wood side.
Sawlog Observations by Species

**Hardwoods**
- Mills and markets recovering from impact of tariffs (with China)
- Very strong demand for low-grade logs (for mats, RR ties, etc.)

**White Pine**
- Very strong demand for mills selling to home centers

**Spruce – Fir**
- Mills moving wood, helped by downtime at mills across the country
- Housing starts a growing cloud on the horizon

*Across all species – high inventory, uncertain future market demand, challenging pricing*
A growing issue for (softwood) mills...

• Markets for this residue have shrunk, and this is a danger sign for a healthy industry
  • Old Town to relieve some concern re chips, getting some good reports
  • The loss of Androscoggin a huge hit for everyone, nobody more than White Pine mills
  • With biomass shrinking, a concern everywhere
Cross Laminated Timber

• While the region has lots of promise for both resource and market (and two announced projects), nobody has broken ground on a CLT manufacturing facility in the Northeast
• First plant in the region will almost certainly use spruce / fir lumber
• There has been very promising research out of UMass – Amherst on the use of hemlock and white pine, but that isn’t where the market will start
Maine Wholesale Electricity Prices (and Futures)
Cost of Fuel, Cost of Fuel plus O&M Shown (estimates)
Electricity Prices Yesterday

• Real-Time Electricity Prices at $13 to $14 per MWh
• At $25 / ton and 1.6 tons per MWh, fuel is $40 per MWh
• It also costs money to pay staff, operate the facility, etc.
• Renewable Energy Certificates can help for facilities that qualify
Modern Wood Heat

• Wood heat projects will be challenged by extremely low oil prices
  • Wood is historically less expensive than oil (on a heating value basis), but that may not be true in the near-term
  • Unlikely to see near-term growth in this market
• Policies of providing Thermal Renewable Energy Certificates (T-RECs) for wood heating can provide significant $$ support for these projects – NH, MA and soon Maine
• Pellet mills operating and producing product, some smaller new facilities in the region
Pulp and Paper

- The product mix is critical right now (COVID-19)
  - Tissue has very high demand
  - Some specialties (anything used for PPE, medical, etc.) very strong
- Increase in packaging – Amazon, UPS, FedEx all reporting increased business
- Decreased demand for printing and writing paper
  - If you don’t have people in schools and offices, you don’t use paper in schools and offices
  - ~50% drop in demand for some grades
  - Coated as well as uncoated products suffering (more than before)
A big question is what will the world look like post-lockdown?
- Is work-from home more common, and if so what does that mean for printing and writing paper?
- Are people becoming even more used to on-line shopping and grocery delivery?
- Some market shifts will be temporary, some will be structural
Since 2014, Maine has lost markets for 4.3 million tons of low-grade (pulpwood and biomass)

• Bucksport
• Lincoln
• Madison
• Jay
• ReEnergy - Ashland
• ReEnergy - Fort Fairfield
• Jonesboro (decrease)
• West Enfield (decrease)
Emerging Industries

• A new wood-based insulation plant is under construction in Madison, Maine, and expects to begin commercial production this year

• Companies have been looking across the Northeast for biofuels, biochemicals, cross-laminated timber, nano-cellulose...

• Efforts in Maine, as well as NH-VT-NY to recruit new wood using facilities
  • Absolute need for new markets for low-grade wood
What Concerns Me...

• Age of Logging Workforce
• Markets for Biomass / Residues / Pulpwood
• Federal Rules for RFS Qualification
• Forest Products Trucking Capacity
  • Quit making trucks wait in line
• Speed (or lack thereof) of innovation / technology adoption in the Industry

Age Distribution of Maine Loggers

Data Source: Maine Logger and Log Trucker Employment Availability and Wage Analysis Report, 2019
Some thoughts...

• We are in a recession
  • We were on a 10-year run of a strong economy (some of it on questionable footing), and were due
  • The trigger was unexpected and much bigger than anyone anticipated

• The economy will not bounce back quickly
  • The solution relies upon the confidence of millions of people to go out and lead “normal” lives (whatever that now means)
  • Most of these people are in suburbs and cities – the fact that your rural area is fine is not relevant
  • Orders from above won’t get the economy going, and a “blinking” economy has lots of dangers

• There will be fundamental changes in how we behave – and identifying those has enormous opportunity for the forest industry (and everyone else)
Things I keep hearing…

• Very real concern about markets for low-grade wood
  • Nothing new, but becoming urgent
  • Impacts everyone, but a huge concern for sawmills (particularly white pine sawmills)

• There is a lot of inventory of logs and finished product
  • Across almost all markets and sectors
  • Will mean a delayed rebound, a rough summer and fall in some areas

• We need to make sure to maintain logging infrastructure – none of this matters if there aren’t professionals to cut wood
The Northeast is Going to Be Fine...

• For better or worse, the forest industry is **accustomed to boom-and-bust cycles**, and has experience handling them.

• We have **markets**, and are incredibly well positioned compared to other parts of the country

• We have the **forest resource and supply infrastructure** (landowners, loggers, entire forest industry ecosystem) that would make other regions jealous

• We live in close proximity to (and are part of) the **greatest collection of consumers** in the history of the world

• There may **never be a better time** to be develop a project or technology that uses low-grade, particularly softwood
The Markets
I would like to add you to my email lists

Send an email to kingsley@inrsllc.com to be placed on our monthly email list, which provides information on markets and developments of interest to the region’s forestry community. I will also add you to my FRA email list, and you will receive invitations to monthly dinner forums and other regional information.
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