

Farm Credit East Economic Trends in the Northeast Forest Industry

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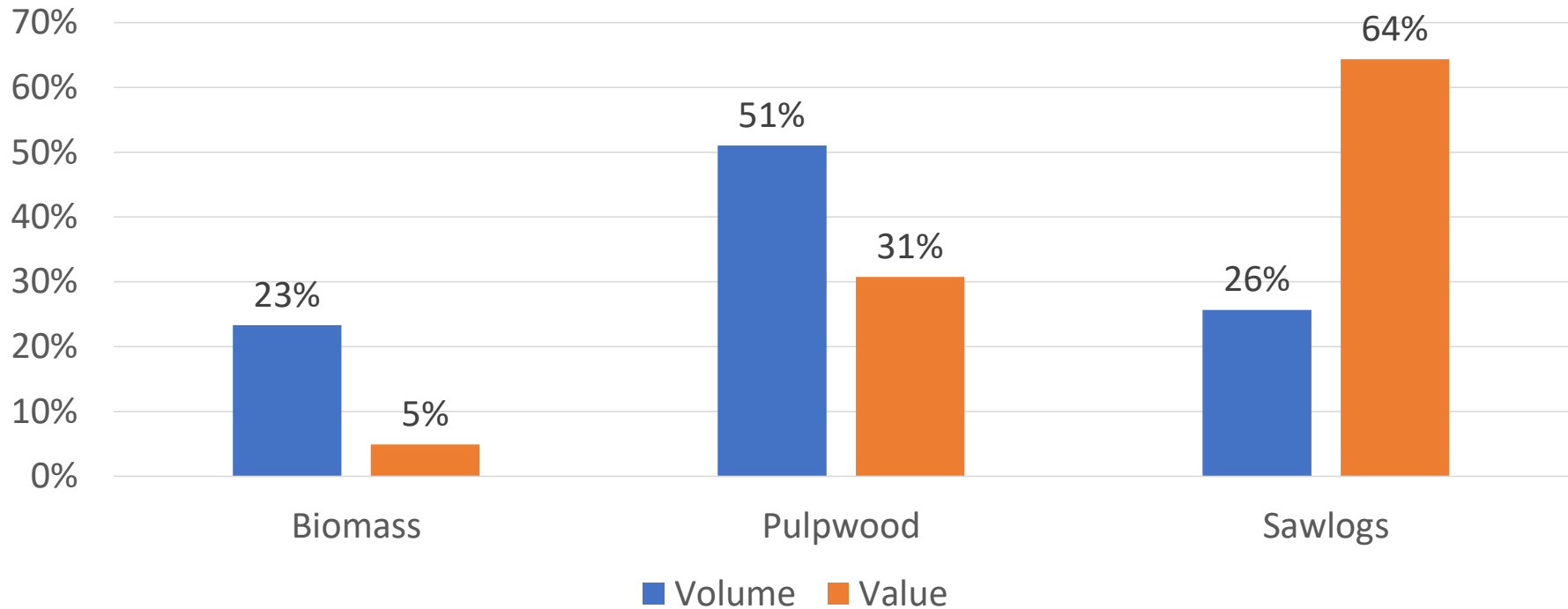
Innovative Natural Resource Solutions LLC



- 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



Note: The product mix can change region to region, but the take-away message doesn't

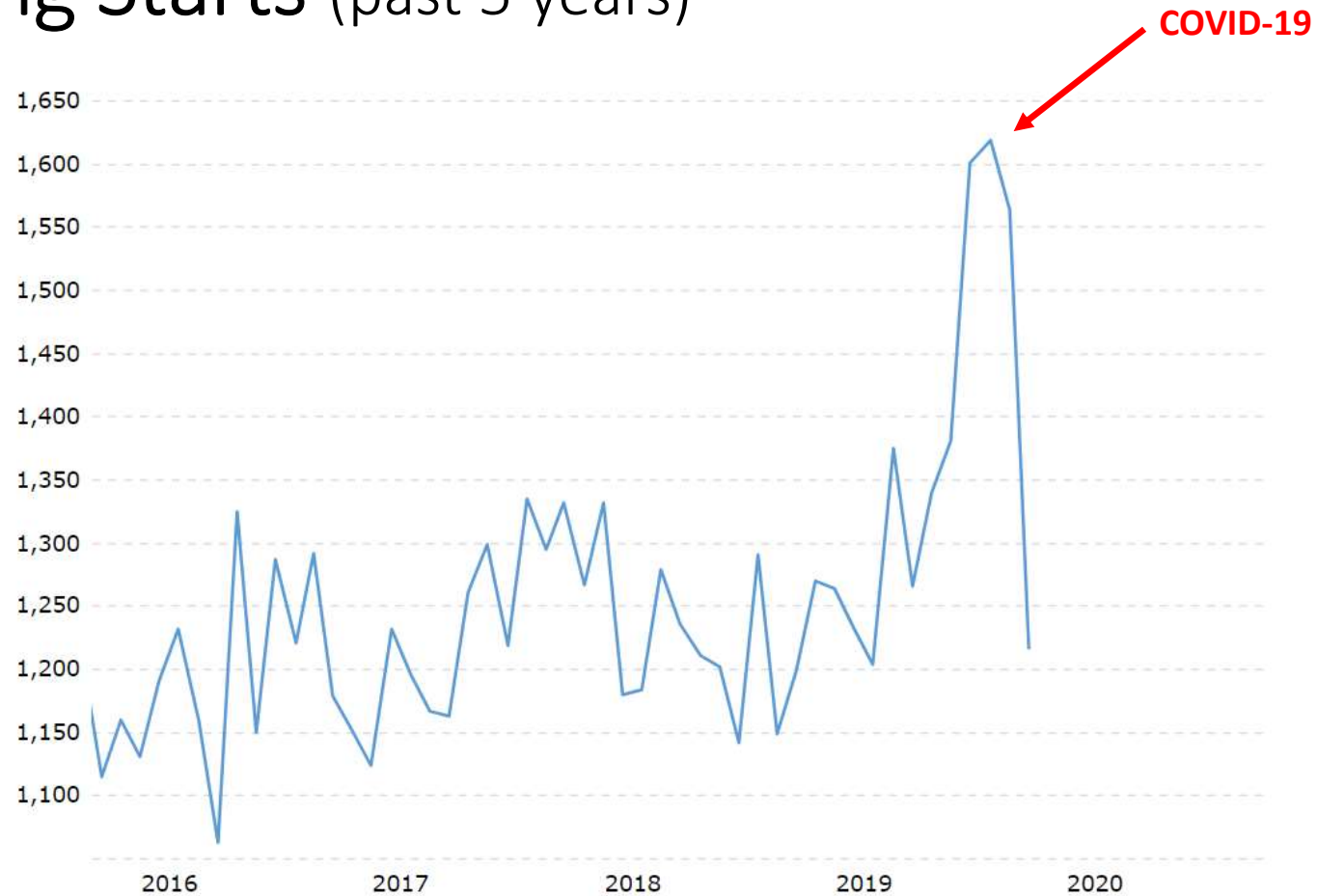




Housing Starts (past 30 years)



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

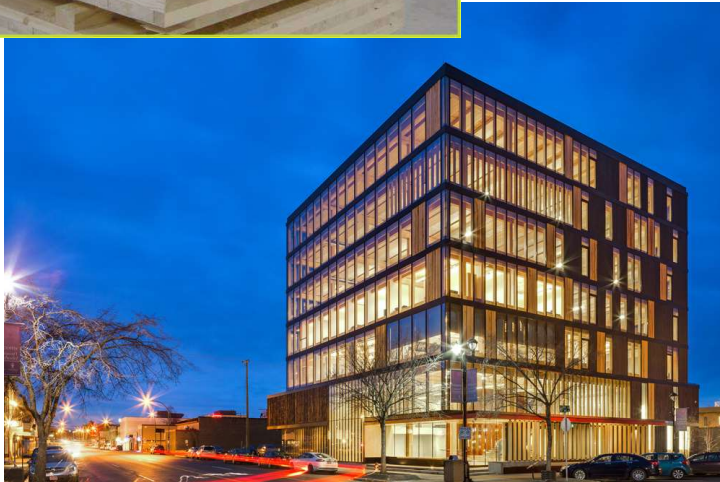


A growing issue for (softwood) mills...

- 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

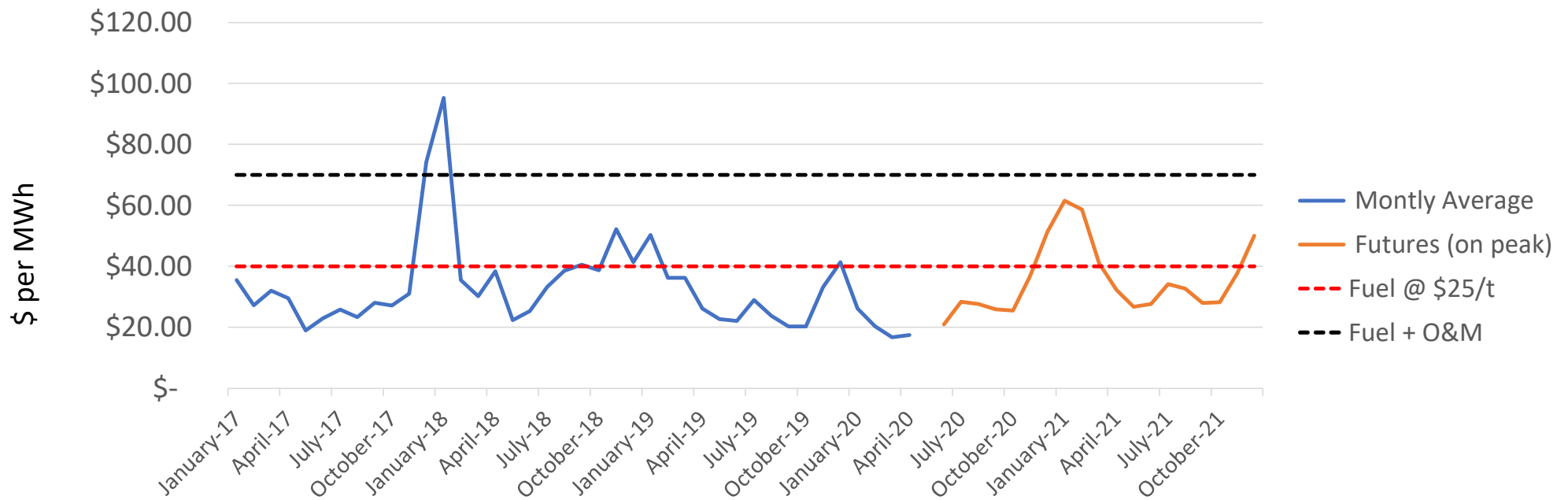


- While the region has lots of promise for both resource and market (and two announced projects), nobody has broken ground on a CLT manufacturing facility in the Northeast
- First plant in the region will almost certainly use spruce / fir lumber
- There has been very promising research out of UMass – Amherst on the use of hemlock and white pine, but that isn't where the market will start



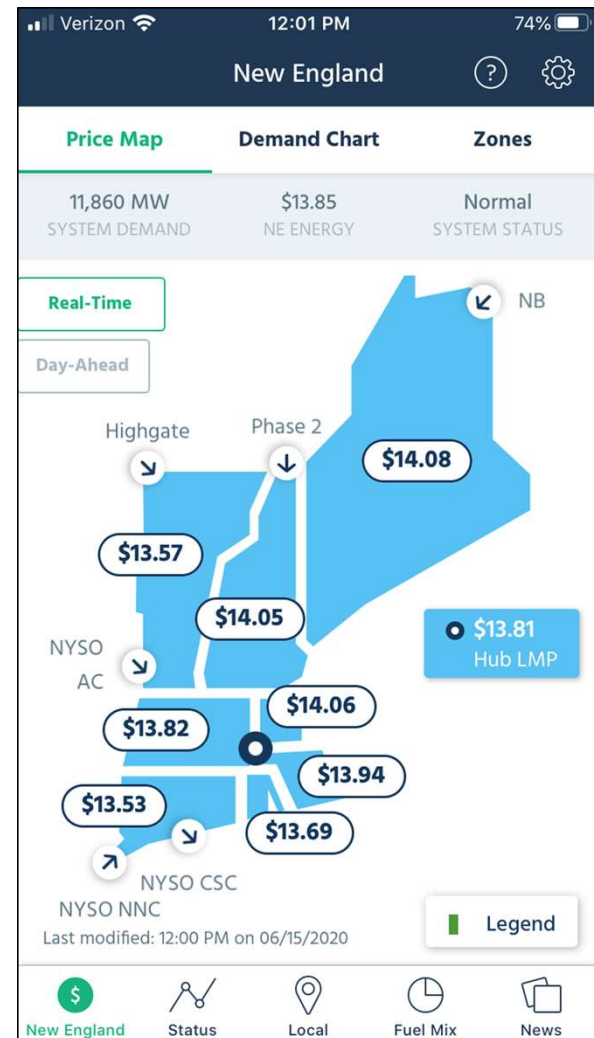
Maine Wholesale Electricity Prices (and Futures)

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

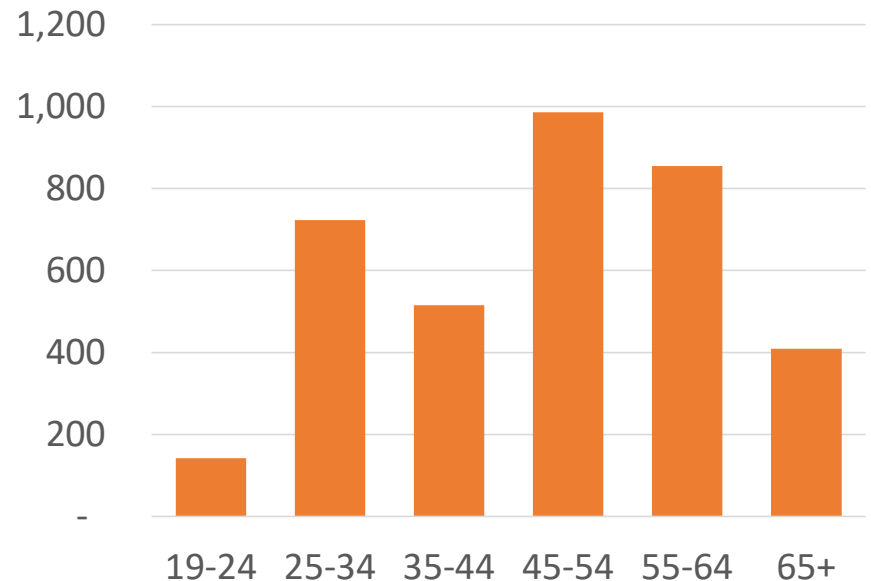


What Concerns Me...

- 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 Truckers 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...

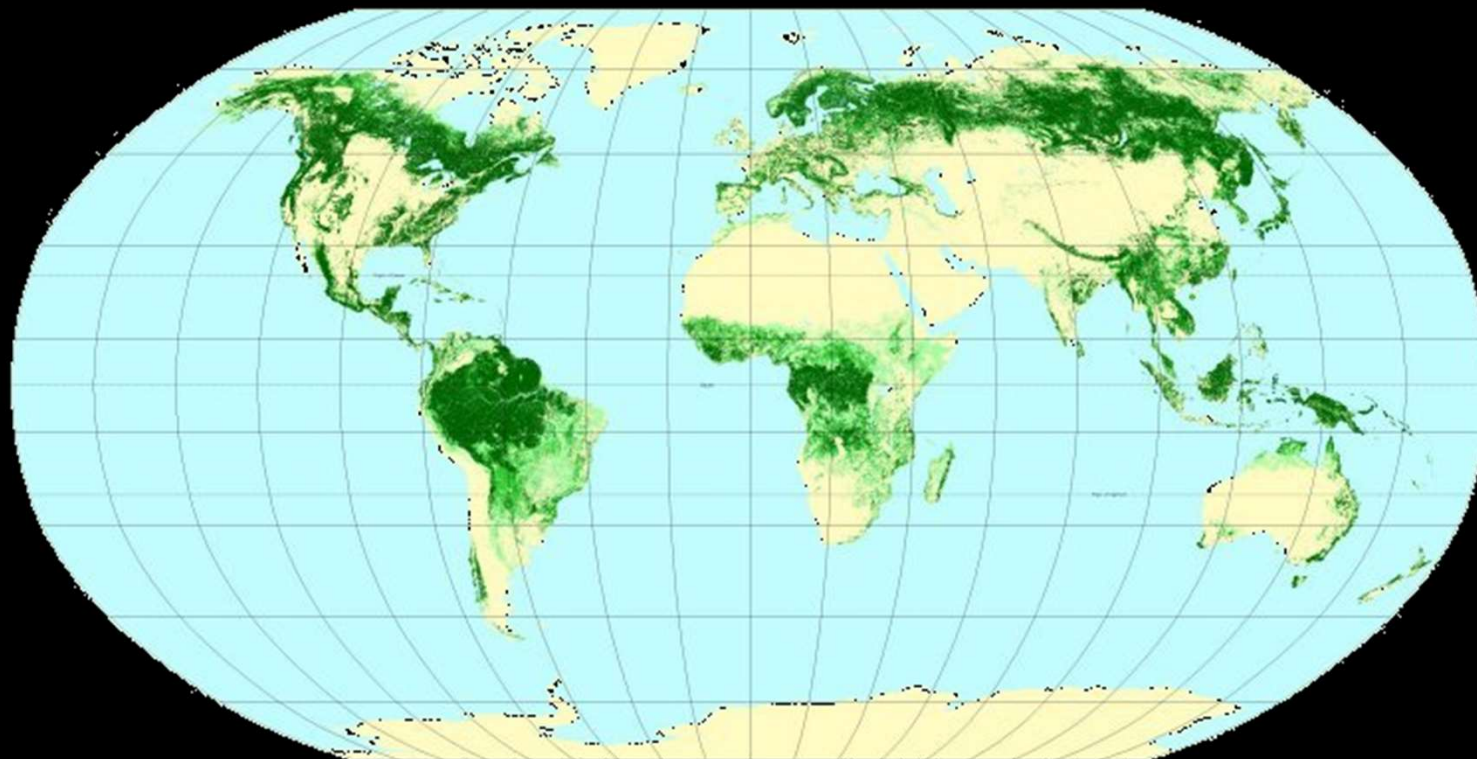
- Very real concern about markets for low-grade wood
 - Nothing new, but becoming urgent
 - Impacts everyone, but a huge concern for sawmills (particularly white pine sawmills)
- There is a lot of inventory of logs and finished product
 - Across almost all markets and sectors
 - Will mean a delayed rebound, 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 develop a project or technology that uses low-grade, particularly softwood





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Source: *U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts*

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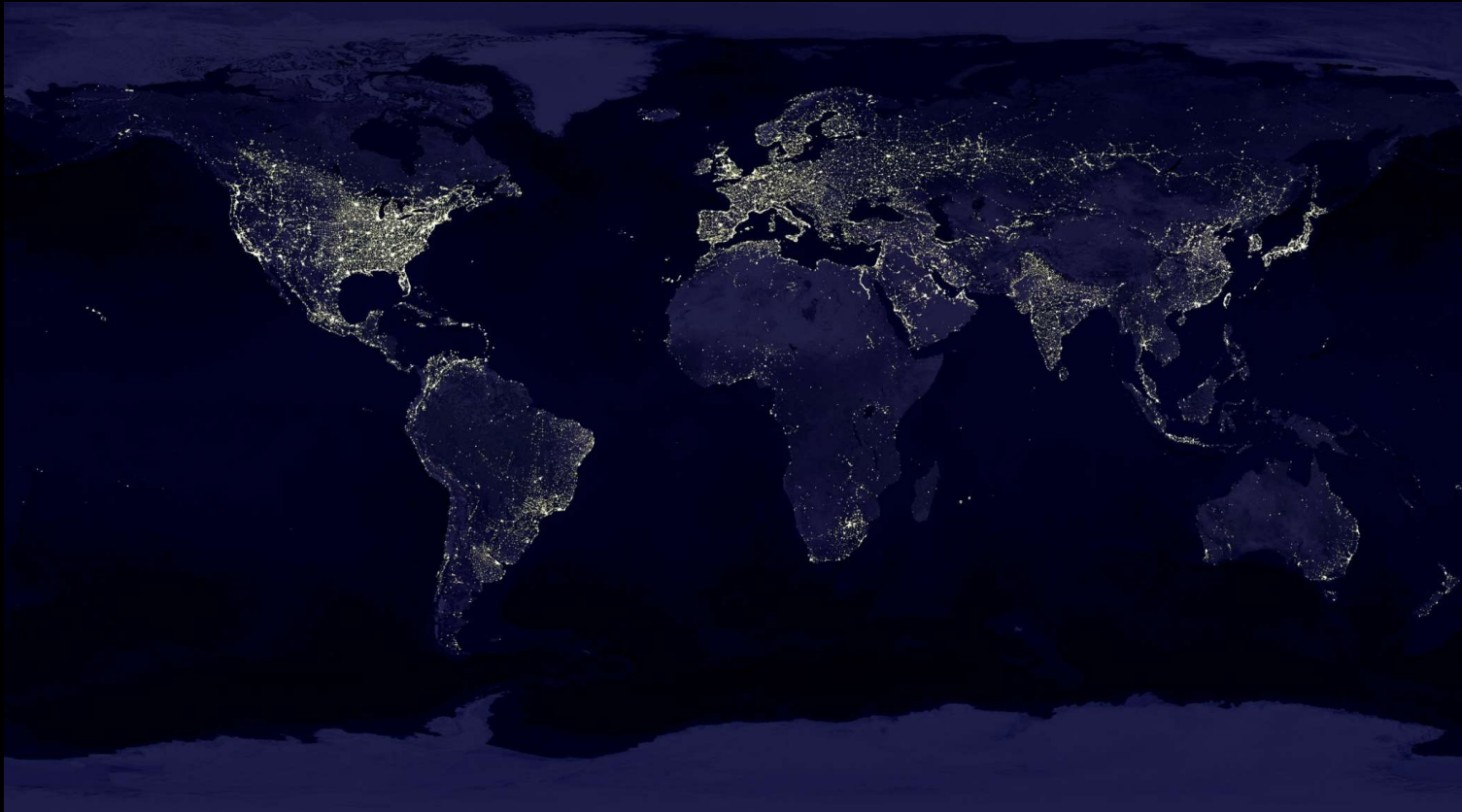
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U.S. Geological Survey, ERDC Data Center

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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