



Industry News

- **China amping up imports** (Feb 1st)
Despite the current economic stagnation, China plans to significantly increase the volume of timber imports from the U.S. during the next several years. According to the U.S. Forest Service, China currently remains the world's largest export market for U.S. hardwood.
— *Timber West*
- **Trees deal with climate change better than expected** (Mar 16th)
Forests may be able to deal with hotter temperatures and contribute less carbon dioxide to the atmosphere than scientists previously thought. Plants release carbon dioxide through a process called respiration. Scientists showed that plants were able to adapt their respiration to increases in temperature over long periods of time, releasing only 5% more carbon dioxide than they did under normal conditions.
— *The New York Times*
- **Overhaul of Maine tree growth tax credit chopped down by committee** (Apr 4th)
Legislation designed to dramatically overhaul Maine's tree growth property tax credit program fell largely on deaf ears Monday as lawmakers on the Legislature's Taxation Committee unanimously rejected the proposal offered by Republican Gov. Paul LePage.
— *Sun Journal*

Industry Overview

Forestland Operations

The months of May and June were remarkably dry in the Northeast. This was an important exception to the rule for what is normally our spring "mud season." Our regular readers will recognize that weather is one of the critical factors that affects the short term availability of wood to our timber markets.

A dry spring means an early start-up to our summer forest operations. In fact, this was one of the earliest startups in recent years. By late May, the ground conditions were solid enough to support logging in most areas, and in stark contrast to prior years, in some cases our foresters found themselves waiting for markets to open rather than for the woods to dry out. At this point, most of our ground operations are up to full speed, although we still find ourselves moving contractors around to better match the market.



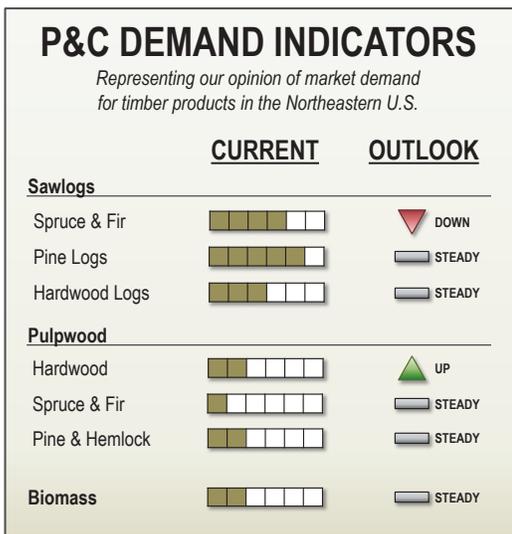
Spruce Budworm pheromone traps, such as the one shown here, are placed on P&C managed property by our foresters to help the Forest Service monitor population changes.

The industry as a whole has been dealing with a great deal of uncertainty surrounding contractor capacity. In the past, the question has been whether or not the current logging force has sufficient succession planning in place for their operations as the workforce gets older. However, the recent reductions in our regional pulpwood consumers, particularly in Maine, centers our immediate concerns on the market's ability to absorb the timber currently being produced.

In short, we have developed a regional workforce that is very good at what they do. Our loggers are efficient and produce a large volume of timber, and have invested a lifetime's worth of capital towards this goal. With markets now constraining this wood flow through quotas and delivery limitations, the regional industry is currently in a situation where there is more productive capacity than there is demand. Therefore, we are more immediately concerned about loggers being able to maintain cash flow to support the long-term health of their business.

While we have not yet seen any direct fallout from Prentiss & Carlisle's larger contractors, fear of the unknown may result in delayed investments in capital or critical maintenance being deferred. Needless to say, we are watching closely.

Forest Product Markets



While most sawn products appear to be holding their demand well, most low-grade forest products are in the throes of a region-wide corrective cycle. This sudden change has been initiated by the closure of nearly all of Maine's regional softwood pulpwood consuming facilities.

Pulpwood Products

Because of the tremendous oversupply of available timber being put on the marketplace, most regional mills came out of winter with full inventories. Normally, mills are used to very light wood deliveries during May and June because of road closures and poor logging conditions. This year, however, they had access to all the spring wood they wanted. Most didn't bother to develop plans for spring volume because they knew that it would be quickly available if they needed it on short notice. All they had to do was open their door.

Regional consumption of hardwood pulpwood at our pulp and paper manufacturers remains very strong, and there is a significant backlog of hardwood currently available to the mills. In a typical year, wood buyers might start chewing their nails after a 3-4 day stretch of rain. Realistically, the backlog is currently so big it may take a 2-3 week stretch for them to begin to think about being concerned. To further the point, the month of June usually represents a low point for pulpwood inventory levels – sometimes we even see what became known as a “spring premium” to deliver wood during times of need. With inventories of hardwood pulpwood bursting at the seams, this feels like a distant memory.

The problem has been amplified by some seasonal shutdowns, where mills have elected to slow or stop production in order to perform various maintenance tasks over what is normally a quiet period. Meanwhile the backlog of hardwood pulpwood continued to grow. The good news is that they typically use this time to address bottlenecks in their systems, which should aid with consumption upon resuming full-scale operations.

A year ago poplar pulpwood was commanding enough of a premium that it was worthwhile for landowners to sort it out of other mixed hardwood pulpwood. In most regions that premium is no longer available. However, both of the regional structural panel/OSB plants, which use poplar in their mix, have been running fairly well and have been strong consumers. Markets for softwood pulpwood have become equally tight – there is only one remaining consumer of spruce/fir pulpwood in the region, which gets almost all of their required volume through internally-run local procurement programs or long-term supply agreements. As a result, open market demand is quite low even in close proximity to the mill. Demand for hemlock and pine pulpwood has been limited in the short term by a series of mechanical issues at consuming facilities, as well as light demand for the finished product.



■ **Loggers suffer one-two punch with mill and biomass plant closures** (Apr 4th)
With the five paper mills that have shut down in the past two years, that leaves only six left in the state of Maine. And with the closure of biomass plants in Enfield and Jonesboro, that leaves only four remaining plants. The collapsing Maine markets make an already challenging job for loggers that much harder.
— *Maine Biz*

■ **BC's beetle chewed forests are recovering fast** (Apr 11th)
Forests in British Columbia are growing much faster than in the past due to climate change and increases in carbon dioxide, and this has helped forests recover from the mountain pine beetle outbreak more than a decade ago. As the outbreak waned, scientists found evidence of faster growing and larger trees emerging in BC forests.
— *Canadian Press*

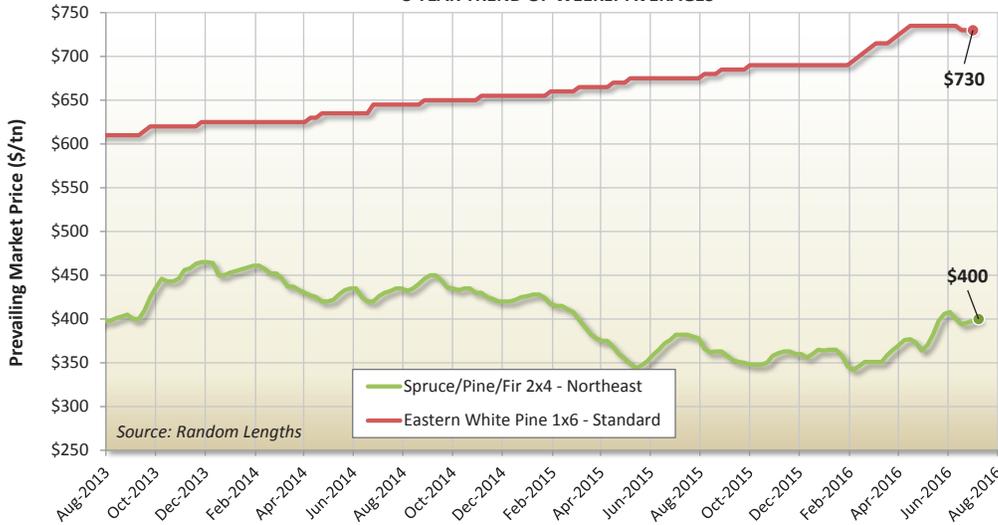
■ **Madison mill workers to get federal job transition help** (Apr 12th)
About 214 people who will lose their jobs in May with the closure of the Madison Paper mill have been cleared to receive federal aid through the Trade Adjustment Assistance (TAA) program, to help them adapt to new jobs or careers. The TAA program helps fund job retraining and provides wage subsidies, which can bridge the gap between what a person was earning and what they make at a new job.
— *Bangor Daily News*

Sawn Products

Softwood

The spruce and fir dimension lumber market remains quite strong, and finished-goods inventories at our regional mills are reported to be in a comfortably lean position. A lean lumber inventory affords them the flexibility in the products they produce, and an ability to more quickly match their customer's demand. Consequently, these facilities are doing what they can to maximize productivity and manufacturing throughput. Demand for softwood sawlogs was solid over the last quarter, however, much like the pulpwood markets, sawmills are having very little trouble acquiring the wood they need. We expect demand to tail off slightly as producers make more available.

PRICE TRENDS IN SOFTWOOD LUMBER
3 YEAR TREND OF WEEKLY AVERAGES



The issue of residuals (chips and sawdust) that we have reported in the past continues to hound dimensional sawmills. With very limited outlets for the material (traditionally pulp mills), both management of the byproduct and the lost revenue source have represented a real challenge for sawmills.

To help address this issue, sawmills have attempted to minimize their byproducts by either tightening their specifications or, in some cases, requiring producers to deliver logs fitted to specific lengths. Historically, spruce and fir dimension sawmills have accepted logs delivered in tree-length form, cut to a specified minimum diameter, generating themselves an acceptable amount of "trim waste" to be chipped and sold to pulp mills. By accepting only logs fitted to the lengths they need, sawmills can virtually eliminate the amount of trim waste they generate. However, this will not solve the problem; it only transfers the problem to the loggers and landowners, who have to deal with the added processing costs, and the waste now left in the forest. Some of this waste can be sold as biomass, and some is used to help with erosion control and to return nutrients and organic material to the soil – however the majority would be sold as pulpwood if there were markets available.

Regional demand for pine logs remains robust, driven by healthy demand for the lumber and relatively low raw material inventories region-wide. Although pine sawmills suffer with the same residual issue as spruce-fir mills, the volume being put on the market is not as high and there are alternative uses for the residuals besides pulpwood. We do know of one hemlock sawmill that was forced to shut down indefinitely during the second quarter because of the persistent difficulty of moving chips.



■ **Legislators approve \$13.4 million bailout of Maine biomass industry** (Apr 15th)

The Legislature voted to back a \$13.4 million taxpayer bailout of at least two of the state's six ailing biomass energy plants that support hundreds of logging jobs. Legislative leaders have been repeatedly drawn to the prospect of helping save the hundreds of logging jobs that depend on biomass. An estimated 1,300 jobs are linked to the 6 plants left in Maine.

— www.pressherald.com

■ **Rumford mill restarts machine, rehires 51 furloughed workers** (Apr 19th)

Catalyst Paper restarted its No. 12 paper machine, producing uncoated freesheet paper intended for use in marketing materials, business documents, newsletters and brochures. That grade of paper is new to the Rumford mill and came from a yearlong product development effort at Catalyst to hone its offerings. The additional hiring for the machine depends on the strength of order volume in the coming weeks.

— *Bangor Daily News*

■ **How a Maine paper mill learned to not love making paper** (Apr 24th)

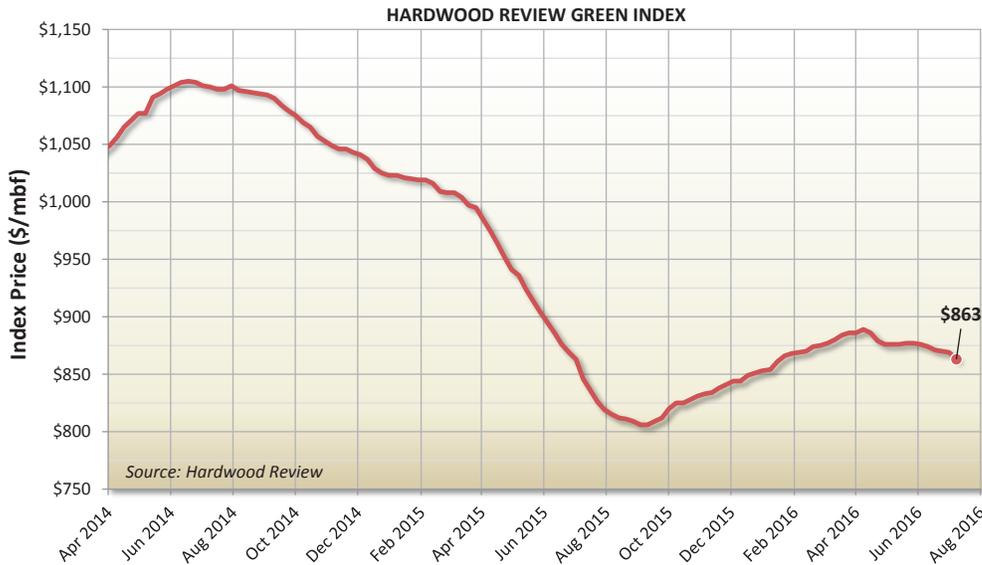
Sappi Paper's mill in Westbrook has remained standing in the 21st century by learning to let go. The mill staked its future on paper with the key of not sticking to things, allowing paper-backed patterns to be pressed into synthetic material, laminate flooring, leather and other products.

— *Bangor Daily News*

Hardwood

Because of the availability and heavy demand for hardwood pulpwood, hardwood logs have been in good supply to sawmills. Generally, loggers harvesting 100 cords of hardwood will wind up with about 80 cords of pulpwood and 20 cords of logs. During the last quarter, heavy pulpwood production propelled production of the logs and supply began to outpace demand. Most of the markets in the northeast are accordingly full on many species, and buyers are much less nervous about running out of what are generally perishable products. This has placed overall pressure on log prices; over the quarter we experienced a 5-7% drop in the price of logs, however we don't expect much further reduction over the next few quarters.

RECENT PRICES IN HARDWOOD LUMBER



Inventories of logs at veneering facilities are similarly full, particularly for red oak. In most cases, log buyers have curtailed their purchasing for a time, or have placed suppliers on quota to artificially stem the tide. The end product is moving well, signaling that this move is being caused by excess wood supply, not a slow market demand for veneers. In the end, more log suppliers are pushing the product than there is capacity to take it.

Final Thoughts

There is a theory in economics called the "tragedy of the commons", which presents a scenario where many individuals, acting rationally and in their own best interest, are motivated to behave in a way that harms the group as a whole. Normally this theory is described in the context of a depletable shared resource, not a renewable one, but I can't help but think that the industry in this region is currently acting in an unhealthy manner for the group as a whole. Timber producers, pressured by their cash flow demands, appear to be in a fight to be first to deliver wood – our pulp facilities regularly have up to a 4-hour line of trucks waiting to unload when they announce a resumption of deliveries. In short, consumption of wood in the state has been good, but production of timber has been better – leading to a demand-supply imbalance that will need to self-correct before we can expect anything to stabilize. This is unhealthy for everyone, and we're concerned that the fight to deliver wood will turn into the fight to see who gives up first.

Benjamin D. Carlisle
PRESIDENT



■ **Biofuel forests for the future** (Apr 26th)

The US Senate seems determined to declare the substitution of wood for coal as a positive step to minimize global climate change. Under the Senate's latest version of the energy bill, the various states could count wood as a "carbon neutral" fuel. However, when trees are cut to provide biofuel for the generation of electricity, nearly all the carbon they contain is released to the atmosphere immediately.

— *The Millbrook Independent*

■ **International Paper to Acquire Weyerhaeuser's Pulp Business for \$2.2 Billion** (May 2nd)

International Paper announced that it has entered into a definitive agreement to purchase Weyerhaeuser's pulp business. Under terms of the agreement, IP will acquire five pulp mills and two converting facilities that produce fluff pulp, softwood pulp, and specialty pulp for a number of consumer applications including diapers, other hygiene products, tissue, and textiles.

— *Wall Street Journal*

■ **As softwood prices tank, Maine gets \$380K to help forest industry** (May 16th)

The U.S.D.A. has awarded the Maine Forest Service a \$380,000 grant to develop programs to help a forest product industry hit by a sharp decline in demand for softwood species. The grant will be used to establish a Wood Energy Assistance Team focused on biomass heating and a program that will create a new job for someone at the forest service to specialize in forest product markets issues.

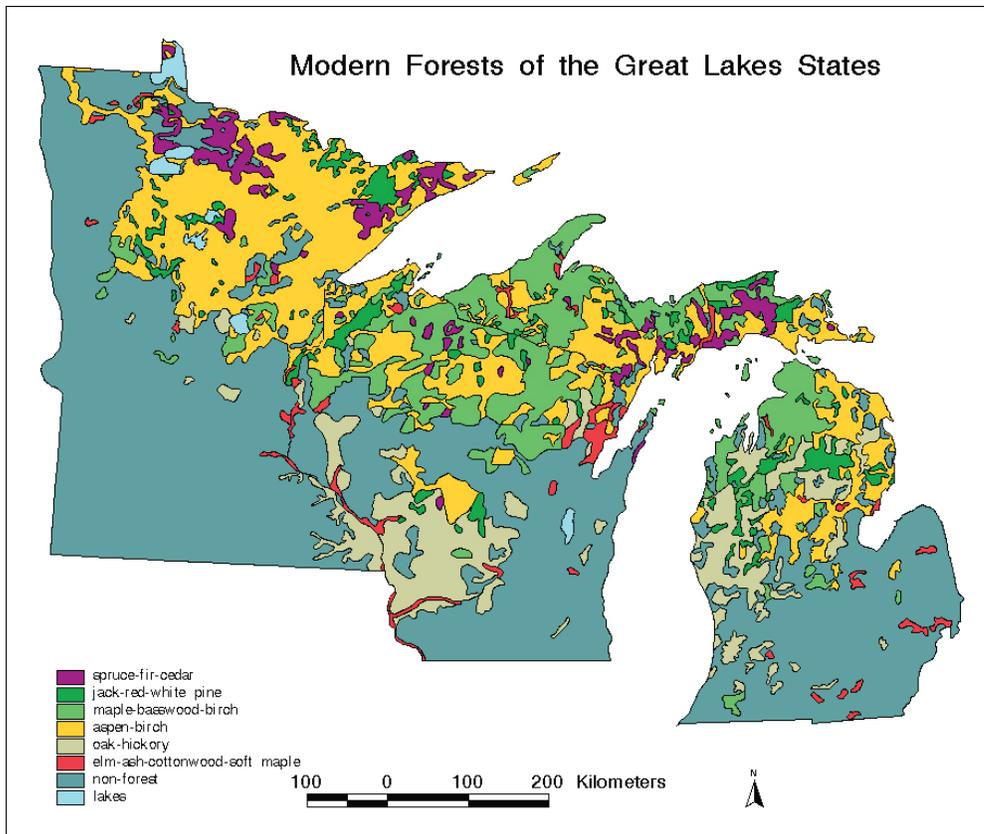
— *Bangor Daily News*

Minnesota's Retail Timberland Market

by Sam Radcliffe, Vice President

Last quarter we profiled Wisconsin's retail timberland market with a focus on prices and price trends. Recently a comparable database of land sales in Minnesota has come to our attention, providing an opportunity to see if our understanding of factors affecting Wisconsin markets holds outside of the state.

Figure 1. General Forest Cover Types in the Lake States



Source: USGS <http://landcover.usgs.gov/luhna/chap6.php>

As next-door neighbors, there are similarities between the forests of Minnesota and Wisconsin, but there are also some important differences:

- As in Wisconsin, Minnesota has a “timber line” that divides the southern more agricultural part of the state from the northern industrial forest area. Figure 1 somewhat exaggerates the lack of forest below the timber line. In both states the southern areas do contain pockets of forest that contribute to commercial timber supply.
- The outstanding feature of Figure 1 is the abrupt change in forest types when crossing the state line. Whereas Wisconsin is dominated by northern hardwood types with a secondary component of aspen/birch and pockets of softwood, northern Minnesota is comprised of boreal types, dominated by aspen/birch but with large areas of softwood.
- As forest product mills have expanded their procurement radii, increasingly the two states supply some of the same markets. This is mostly true for pulpwood, which despite being a relatively low-valued commodity, can travel great distances economically via rail. For sawtimber, due to the forest type differences, Minnesota is unable to grow the valuable high quality northern hardwoods that are sawn in Wisconsin and Michigan. Consequently, hardwood lumber production is concentrated in Wisconsin and the movement of sawlogs across state lines is substantially less than the movement of pulpwood.



update

2nd Quarter 2016

■ **National Park Service leader hears opposition, some support for monument during Katahdin-area forum** (May 16th)

Some Katahdin region leaders told the National Park Service's top administrator Monday that a monument proposed by Roxanne Quimby's family for lands east of Baxter State Park was the vision of a millionaire who was using her money and influence to control their destiny. Out of the approximately 75 people there, two spoke in favor of the monument.

— Bangor Daily News

■ **Woodland, Sappi land freight rail grants to lower mill cost** (May 18th)

Baileyville and Skowhegan paper mills will receive state grants for railroad improvements intended to make shipping and receiving from their facilities more efficient. The state's Industrial Rail Access Program awarded about \$843,000 to six projects in its latest round, including the mill awards, each with a matching amount from the recipient.

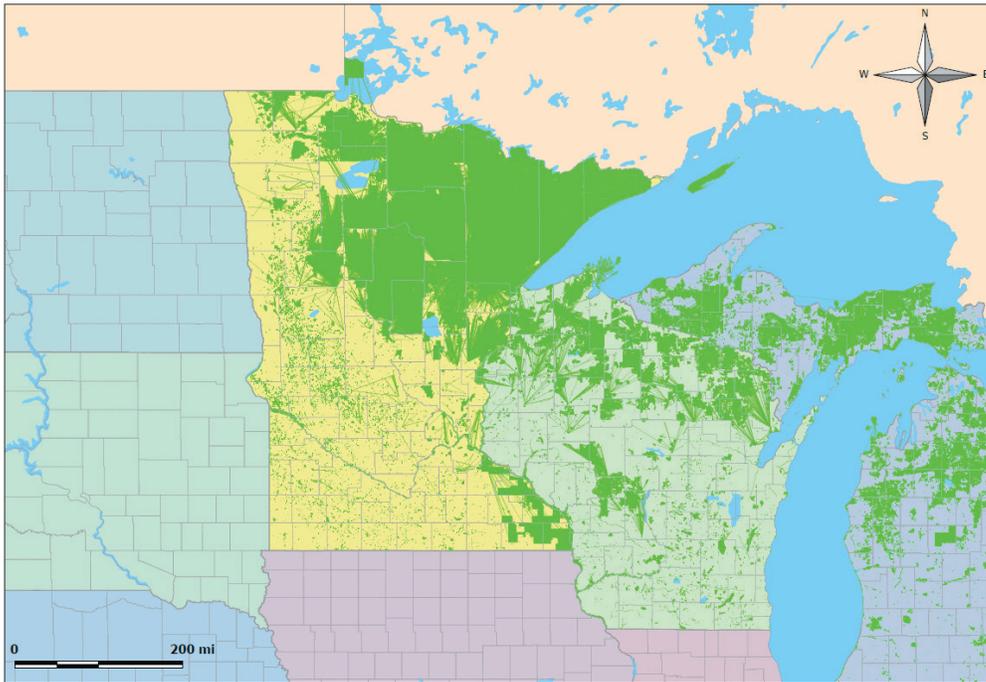
— Bangor Daily News

■ **Proposed national park is a multimillion-dollar gift wrapped up in distrust** (May 22nd)

The nearly 88,000 acres were meant to be a gift, donated along with a \$40M endowment so that part of Maine's North Woods might be protected forever as a national park. Roxanne Quimby has been trying for more than a decade. Her effort has bitterly divided this corner of New England, where shuttered paper mills have led to crippling unemployment and a shrinking population, and where distrust of the federal government runs deep.

— The Washington Post

Figure 2. Public Forest Land in Minnesota and Wisconsin Counties

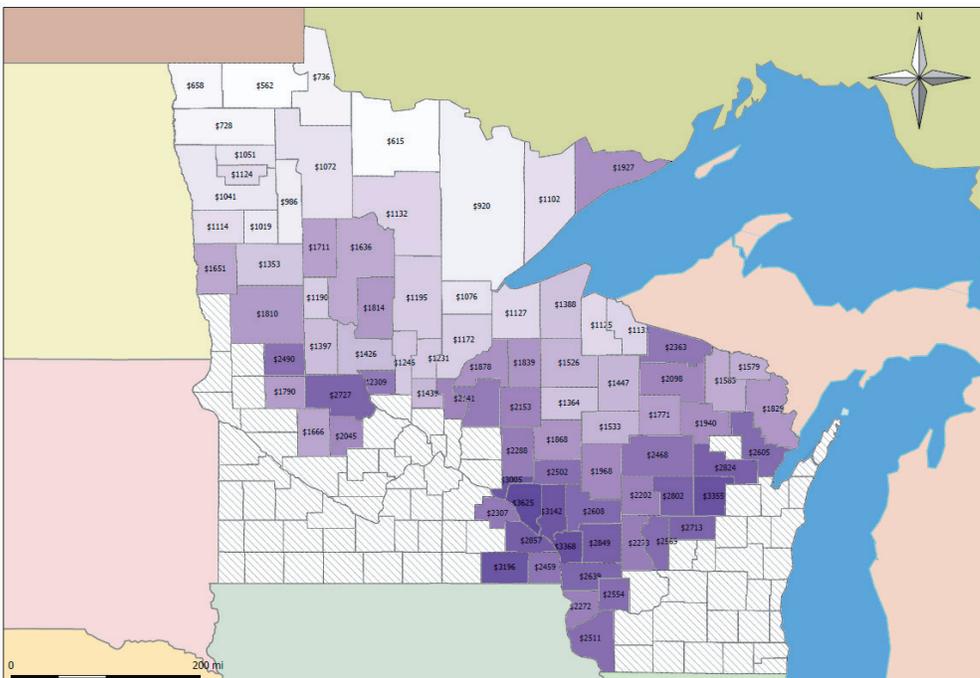


■ Both states are heavy to public land ownership (Figure 2), but Minnesota has by far the highest proportion of publicly owned forests of any state in the eastern US. More than half of the forest land in Minnesota is owned by federal, state or county governments.

There are also similarities and differences in observable trends:

■ As in Wisconsin, Minnesota prices are higher in areas close to the urban centers (Milwaukee, Minneapolis-St. Paul) or in high amenity areas (Vilas County, WI, Lake County, MN) (Figure 3). Sparsely populated northern Minnesota shows the lowest prices in the region.

Figure 3. Pattern of Average Forest Land Sale Prices among Minnesota and Wisconsin Counties 2007-14, (\$/acre) (Sources: MN Dept. Revenue, WI NASS)



■ **Indian papermaker moves to acquire Rumford mill owner** (May 26th)
Investors holding a majority stake in Catalyst Paper Corp. have agreed to a potential acquisition of the company by Kejriwal Group International, a move Catalyst said would mean new investment in its mills. The Mumbai-based Kejriwal agreed to acquire Catalyst at a price of approximately \$6 per share (Canadian), which sent Catalyst's stock soaring to nearly \$5 earlier this week.
— *Bangor Daily News*

■ **Congress confirms biomass should help fight climate change** (May 31st)
In a rare moment of bipartisan cooperation, the Senate passed a far-ranging energy bill. Critics have quickly homed in on a unanimously adopted amendment recognizing the renewability and carbon benefits of biomass energy derived from wood and plant material. That designation puts biomass in the same category as wind, solar, and other renewables in the eyes of federal officials.
— *The Hill*

■ **U.S., Canada lumber talks stalled, litigation looms: sources** (June 10th)
Talks between Canada and the United States to resolve a dispute over exports of softwood lumber are making little progress and the matter likely will return to the courts. The most recent round of arguments ended with a 2006 deal that expired in October 2015. Both sides agreed to take no action for a year after that, but without a new agreement, U.S. firms look set to file new damage claims.
— *Reuters*



- During the most recent 10-year period for which data is available, the acreage of forest land sold in Wisconsin was in a steady and steep decline until 2009, then slowly picked up as the economy recovered from the financial crisis. As shown in Figure 4, the overall level of sales is much lower in Minnesota and the data does not exhibit a steep decline prior to the recession. Minnesota sales did however pick up after 2009, as in Wisconsin. Interestingly, in each state the total acreage sold during this period represented about 2 percent of the private land in the state.
- Prices in the two states followed similar trends, although much lower on average in Minnesota than in Wisconsin (Figure 4). Since 2011 prices in both states have been on an upward trajectory.

Figure 4. 10-Year Trends in Acres Sold and Price per Acre for Forest Land in Minnesota and Northern Wisconsin
(Sources: MN Dept. Revenue, WI NASS)

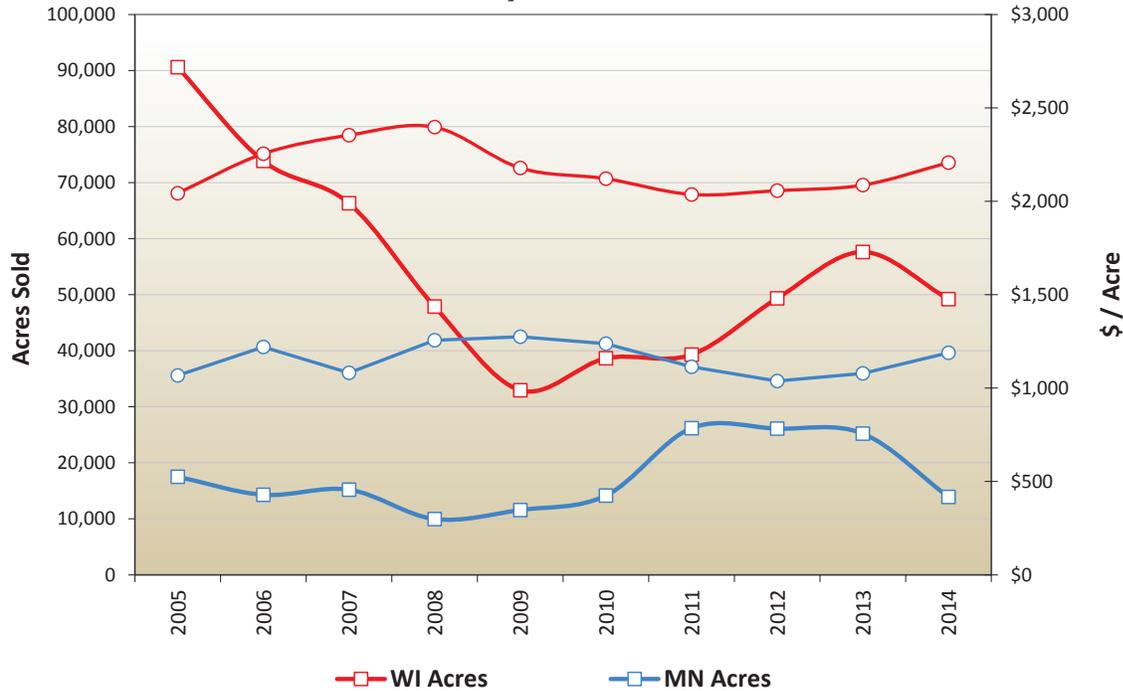
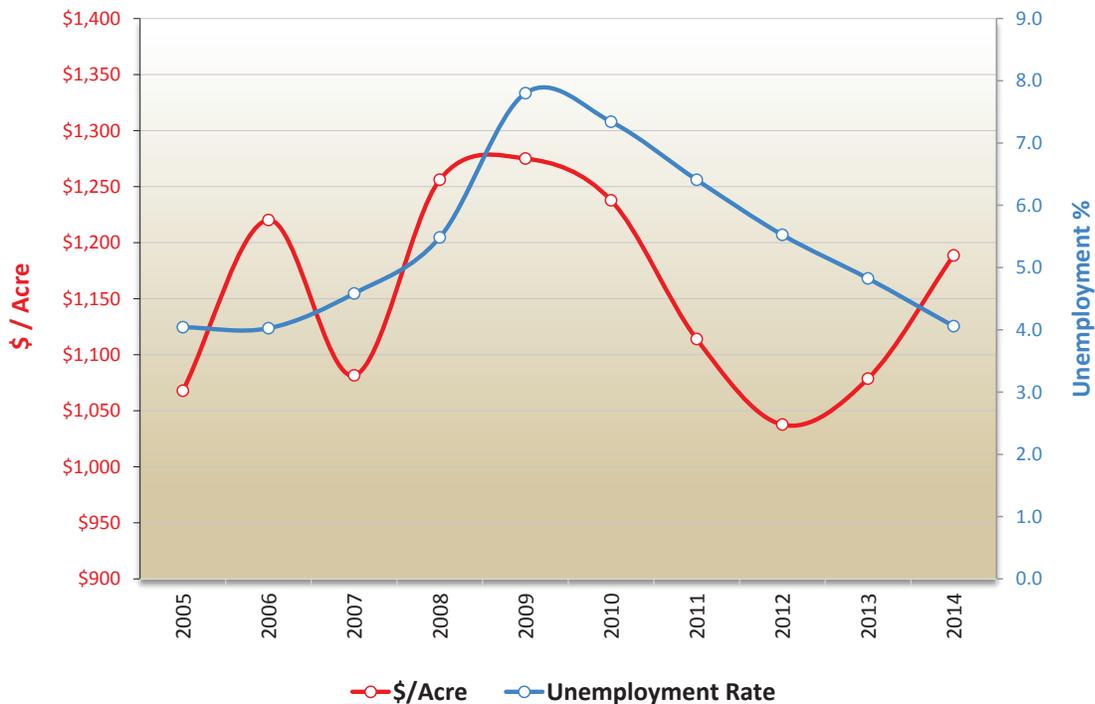


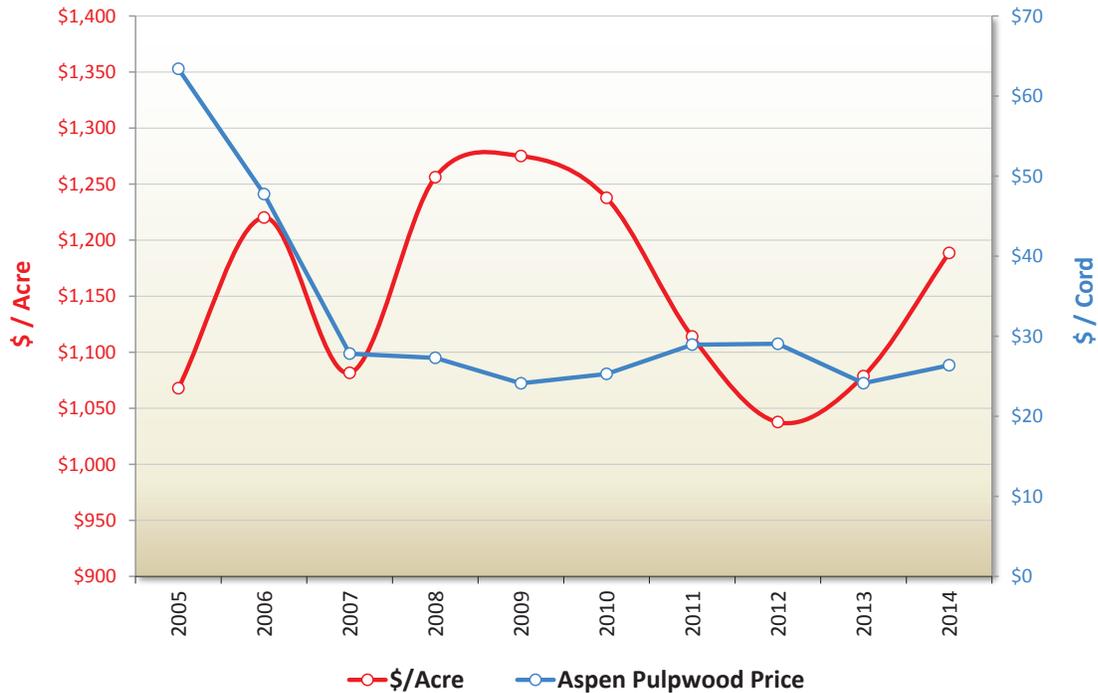
Figure 5. 10-Year Trends in Minnesota's Unemployment Rate and Price per Acre for Forest Land in Minnesota
(Sources: MN Dept. Revenue, US Bureau of Labor Statistics)





- When Wisconsin's unemployment rate spiked in 2008, forest land prices swooned. As the unemployment rate gradually declined, prices stabilized, then rose. No such trend can be seen in Minnesota (Figure 5), where unemployment is generally lower and where the state economy was not as impacted by the national recession. Minnesota prices have been more volatile than in Wisconsin, although at a lower level and within a tighter range.
- As in Wisconsin, in Minnesota there appears to be no correlation between timber prices and forest land prices (Figure 6). However, it does seem logical that the higher timber values found in Wisconsin (due to species and quality factors) could be a significant contributor to the higher land prices relative to Minnesota.

Figure 6. 10-Year Trends in Aspen Pulpwood Price per Cord and Price Acre for Forest Land in Minnesota
(Sources: MN Dept. Revenue, Timber Mart North)



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