Madison's Lumber Reporter

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News & Updates

Madison's Timber Preview

This week's issue of *Madison's Timber Preview* examines the latest developments in US mortgage lending, and looks at real estate sales figures released this week.

Contact us any time for a subscription.

Kruger Cuts 187 Workers

Montreal, QC-based, tissue manufacturer Kruger Products announced this week it will lay off 187 of its nearly 600 employees at its New Westminster, BC, mill.

The job losses, effective August 31, come as the company looks to focus on its "core" business of consumer and commercial tissue production and distribution, said Chuck Stewart, the mill's general manager.

Canada Housing Starts, Building Permits

Canadian housing starts were up more than expected in February, Canada Mortgage and Housing Corp. said Thursday. New home construction started at an annual rate of 201,100 units last month, up 1.5 per cent from an upwardly revised 198,100 in January.

READ MORE

Housing Starts, Japan

Japan's housing starts rose 5 per cent in January over December, to 822,000 seasonally adjusted units, according to the *Japan Lumber Reports*. READ MORE

Vegitative Remote Sensing

Further to *Madison's* coverage of the Association of British Columbia Forest Professional's Annual General Meeting in last week's issue, is an update this week on the latest developments in LiDar and its current uses.

Albert Nussbaum, Director of the Forest Analysis and Inventory Branch at British Columbia Public Service, and Taylor Davis, LiDAR applications specialist with Terra Remote Sensing, gave presentations for a session titled, "*From Pixels to Trees: The Art of Remote Sensing in the Digital Age*". Nussbaum's work is focussed on allowable annual cut determinations in support of policy development, while Davis is involved in researching and developing new environmental applications of integrated remote sensing.

Light detection and ranging (LiDAR) data has come into favour recently as one method to determine forest characterization. LiDAR can be a valuable tool in the inventory process, when combined with all the measured and derived attributes required to complete a forest inventory. At the moment, however, the most-used application for the data that comes out of a LiDAR survey is for engineering purposes. LiDAR elevation data is accurate, and processing algorithms are increasingly robust and standardized.

To find out more about this exciting technology, Madison's contacted Nussbaum at the BC Ministry of Forests, Lands, and Natural Resource Operations.

"The extremely detailed data gathered from a LiDAR survey is enriched with other data, some taken from ground sampling with GPS and more coming from visual data layers like aerial photography or satellite imagery," explained Nussbaum in a phone interview. READ MORE

CANADIAN HOUSING STARTS
Actual and Seasonally Adjusted Annual Rates

	February 2012		January 2012	
	Actual	SAAR	Actual	SAAR
Canada, all areas	**12,136**	**201,100**	**12,950**	**197,900**
urban ctrs with >10,000	11,498	182,800	12,220	176,600
singles, urban centres	3,487	67,400	3,596	64,900
multiples, urban centres	8,011	115,400	8,624	111,700
rural areas	638	18,300	730	21,300
Atlantic urban centres	256	7,100	440	8,400
Quebec urban centres	1,939	42,100	1,712	28,200
Ontario urban centres	4,202	64,100	5,626	77,300
Prairie urban centres	2,799	39,900	2,397	35,900
BC urban centres	2,302	29,600	2,045	27,000

Source: Canada Mortgage and Housing Corporation

JAPANESE HOUSING STARTS

Month	TOTAL	Non-Wood	Wood	%Wood
Jan-12	65,984	30,867	35,117	53
Dec-11	69,069	28,531	40,538	59
Nov-11	72,635	32,507	40,128	55
Oct-11	67,273	29,198	38,075	57
Sep-11	64,206	27,525	36,681	57
Aug-11	81,986	35,085	46,901	57
Jul-11	83,398	35,238	48,160	58
Jun-11	72,687	32,438	40,249	55
May-11	63,726	29,600	34,126	54
Apr-11	66,757	31,475	35,282	53
Mar-11	63,419	27,994	35,425	56
Feb-11	62,252	28,720	33,532	54

Source: Japan Wood Products Information and Research Center

Alberta Forest Products Association - 4Q 2012

Values of lumber, panelboard, pulp and paper manufactured by Alberta Forest Products Association-member companies totalled approximately $2.2 billion for 2011. The value of production was down roughly $152 million, or 6.6 per cent from 2010. On a quarterly basis, production values declined to $484 million in 4Q 2011. Production values for 3Q were $548 million, while 4Q 2010 saw values of $579 million.

LUMBER – AFPA-member companies produced 2.8 billion board feet (mmfbm) of lumber in 2011 with a value of $702 million. Part of this production came from the secondary manufacturing sector. Total production volumes were down 47 mmfbm, or 1.7 per cent million from 2010, while values dropped $37 million, or 5.1 per cent.

PANELBOARD – AFPA-member Panelboard operators produced 1.1 billion square feet of 7/16 inch equivalent product in 2011, valued at $268 million. Production was up 15.8 million square feet, or 1.4 per cent, but weaker prices led to a $36 million, or 11.7 per cent drop in values.

SOURCE:
Alberta Forest Products Association

CUMULATIVE TOTALS - ALL AFPA SECTORS

Q4-2011	**$483,900,000**	Q4-2010	$579,400,000
Full year 2011	$2,159,135,000	Full year 2010	$2,311,460,000

Production Figures and Values – (2010 and 2011)

Lumber	2010		2011	
Year/Quarter	Production (mmfbm)	$C Value (000,000s)	Production (mmfbm)	$C Value (000,000s)
1st Quarter	674.7	$184.8	656.8	$192.2
2nd Quarter	727.1	$196.7	730.3	$168.6
3rd Quarter	732.5	$169.6	720.4	$172.9
4th Quarter	698.9	$188.6	678.9	$168.7
Yearly Totals	**2,833.2**	**$739.7**	**2,786.4**	**$702.4**

Panelboard	2010		2011	
Year/Quarter	Production (mm sq ft)	$C Value (000,000s)	Production (mm sq ft)	$C Value (000,000s)
1st Quarter	258.4	$70.9	285.1	$69.5
2nd Quarter	294.7	$95.5	302.5	$68.6
3rd Quarter	284.2	$72.4	273.0	$67.5
4th Quarter	264.8	$64.7	257.3	$62.5
Yearly Totals	**1,102.1**	**$303.5**	**1,117.9**	**$268.0**

Japan's North American Lumber and Russian Log and Lumber Imports - 2011

SOURCE: Japan Lumber Reports

Lumber import from North America in 2011

	2011	'11/'10
SPF	1,502	99.1
Pine	11	119.2
Spruce/fir	7	89.3
Hemlock	403	96.7
Douglas fir	627	111.2
Cypress	88	103.4
Sitka spruce	18	81.9
Others	64	91.7
Total softwood	2,725	101.1
Total lumber	2,785	101.4
U.S.A.	447	113.4
Canada	2,338	99.3

Russian log and lumber import in 2011

Species	2011	'11/'10
Whitewood	102	93.4
Larch	108	50.1
Red pine	118	124.7
White pine	1	18.3
Total sawlogs	330	77.0
Pulp logs	0.028	1.3
Total softwood log	330	76.7
Hardwood logs	13	135.8
Total logs	343	78.0
Lumber	683	107.6

Unit : 1,000 cbms Comparison : %

Prices are in U.S. dollars per 1,000 fbm.

Key Prices

	This Week	Last Week	Change	Month Ago	Change	Year Ago	Change
WSPF KD R/L 2x4	**276**	273	+3	267	+9	302	-26
WSPF KD R/L 2x6	**288**	279	+9	270	+18	274	+14
WSPF KD R/L 2x8	**272**	260	+12	252	+20	278	-6
WSPF KD R/L 2x10	**314**	314	0	312	+2	326	-12
WSPF KD PET 2x4 Stud	**280**	280	0	260	+20	285	-5
WSPF KD PET 2x6 Stud	**245**	245	0	265	+20	320	-75
Douglas Fir Green R/L 2x4	**250**	245	+5	240	+10	280	-30
Douglas Fir Green R/L 2x10	**315**	300	+15	315	0	285	+30
ESPF KD 2x4 8ft Stud	**350**	350	0	330	+20	335	+15
OSB Ontario 7/16" (CDN$)	**215**	215	0	194	+21	205	+10
CSPlywood Toronto 3/8" (CDN$)	**343**	340	+3	318	+25	310	+33

Weekly News

Home Building, Canada

CONTINUED Canadian housing starts in urban areas were up 3.4 per cent to an annualized rate of 182,800, while rural starts were down 14.1 per cent to 18,300.

By province, urban starts were up 49.8 per cent in Quebec, 10.2 per cent in the Prairies and 9.6 per cent in B.C. They were down 16.9 per cent in Ontario and 15.5 per cent in the Atlantic.

The value of building permits issued in Canada fell by 12.3 per cent in January, following a 10.5 per cent rise the month before, said Statistics Canada Thursday.

Contractors took out a total of $6 billion worth of permits in January, down from the $6.8 billion in December.

Statistics Canada said the decline came from decreases in both the residential and non-residential sectors.

Lower construction plans for multi-family dwellings in Ontario drove the total lower. The value of building permits for multi-family dwellings fell 12.4 per cent to $1.7 billion in January, following a 30.8 per cent advance in December.

Also Thursday, Statistics Canada said its new-housing price index was up 0.1 per cent for January, marking the 10th straight month this measure has risen.

Japan Housing Starts

CONTINUED January housing starts fell in Japan on a year-over-year basis, however, by 1.1 per cent compared to 2011, says the *Japan Lumber Journal*.

New owner's units declined by 2.7 per cent in January compared to that month a year ealier. Condominium starts, while more than 10,000 units seasonally adjusted, were lower than in January 2011.

The share of wood-based units also fell, by 5.5 points to 53.2 per cent, for a total of 35,117.

Decker Lake Fire

The community of Burns Lake, British Columbia, just can't catch a break. A fire started at the planer mill of Decker Lake Forest Products Tuesday morning.

Approximately 50 employees were on site who helped fight the fire before the Burns Lake Fire Department and other emergency crews arrived on scene.

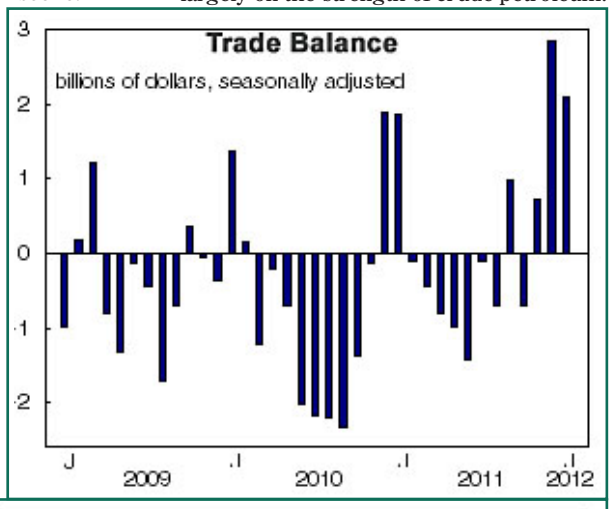
"The fire was contained by the mill employees and due to their quick response and training they were able to prevent the fire from spreading and causing further damage to the mill "stated S/Sgt. Grant MacDonald, Commander of the Burns Lake Detachment, according to *Opinion250*.

Canadian International Merchandise Trade

Canada's merchandise exports declined 2.3 per cent and imports edged down 0.6 per cent in January, according to Statistics Canada Friday. As a result, Canada's trade surplus narrowed from $2.9 billion in December 2011 to $2.1 billion in January 2012. This was the third consecutive monthly trade surplus.

Exports decreased to $41.4 billion in January, as prices fell 2.2%. Lower exports of precious metals and alloys as well as aircraft, engines and parts largely contributed to the decline in value. Higher exports of crude petroleum partially offset the decrease in exports.

Exports to the United States edged up 0.3 per cent to $30.6 billion in January, largely on the strength of crude petroleum.



Remote Sensing

New Applications of LiDAR

CONTINUED "LiDAR is complementary to existing data," Nussbaum continued. "The latest improvements in this technology have been in the area a survey can cover, and in the data that is returned. The planes can now fly higher, covering more ground, without losing resolution. In fact there is so much data gathered, that a tremendous amount of energy is used in the data processing. There is an army of people right now looking at LiDAR data.

by Kéta Kosman

"The application of LiDAR so far in BC is localized," Nussbaum said. "For example; in municipal areas, this survey is used on a small scale as an intense application."

When asked about using LiDAR to survey BC's merchantable timberland, Nussbaum replied, "In the future, areas that are being managed intensely, where there is a lot of competition, and where the fibre is scarce, are where LiDAR data could be very useful. Of course this would be in combination with existing data, and with surveys on the ground which use GPS. But where there is no timber harvesting or population pressure, in less dense areas, deploying LiDAR to survey BC's forests would probably be too costly."

Using LiDAR, Terra Remote Sensing offers geospatial data captured using advanced remote sensing techniques, and specializes in providing data solutions for CADD software, enterprise applications and custom GIS programs.

Vegetation mapping through the use of advanced remote sensing technology enables researchers to quantify and qualify the amount and health of vegetation. Recently, using high-resolution hyperspectral imagery provided by Terra, researchers at the University of Victoria made breakthroughs identifying forest stands under 'green attack' by the mountain pine beetle. Having the ability to detect tree stands affected by the mountain pine beetle years before tree mortality occurs is the first step towards stemming the tide of extensive damage in conifer forests caused by the beetle.

Terra's Taylor Davis explained further, also in a phone interview, "At this moment the technology is still advancing The more people there are working with the data, the more algorithms there are, the greater our understanding of the land.

"When using LiDAR to survey beetle kill and tree health, each surface reflects a different colour, absorbing and releasing different parts of the electromagnetic spectrum. Together with our partner research group, the LiDAR and Hyperspectral Research Group at the University of Victoria, we look at the individual bands of light, for example with a beetle-infected tree that is still very much alive, we look at how the spectral signature is different than a healthy tree. So we can identify trees under green attack, and trees in distress. From a provincial standpoint, we can identify the extent of beetle infection and how it is spreading through a timber stand. This gives forest companies a three-year jump on knowing when the trees will get to the red stage."

Davis and Nussbaum agree that the expense in using LiDAR, especially in surveys that return very dense data, is in the analysis.

"Data acquisition is not the expensive part," said Nussbaum. "In terms of using LiDAR to identify tree stands prior to the timber degrading following pine beetle infestation, processing that data can take a year."

However, using LiDAR to measure fuel loads on the ground once the trees are dead is very useful to assess forest fire risk, indicated both Nussbaum and Davis.

"LiDAR can measure plant chlorophyll levels and soil moisture, plus timber volumes. In combination with slope and aspect of the ground, that data can be used to make fire models, to determine fire spread and behaviour."

Nussbaum detailed, "LiDAR bounces off the ground, off objects, it doesn't penetrate anything. So it can be very useful to measure fuel load."

All this talk of terrain and forest inventory surveys reminded Madison's that more Canadian groups are working with LiDAR for other purposes.

Jack MacDonald is Program Leader in Harvesting Operations for FPInnovations in Vancouver.

"We are developing a method to use LiDAR for the BC Forest Safety Council steep slope risk assessment," MacDonald explained to *Madison's* in a phone interview. "We prepare a map to identify areas with the most potential for safety concerns, in terms of the timber harvesting machines operating on the slopes. Information on slope, roughness, length of slope, and soil, are combined to provide a assessment that will help layout people focus their efforts to determine where is the highest risk for machine instability.

"FPInnovations is working on a prototype, to be ready this spring, using LiDAR data supplied by a coastal member company. We will then expand on the initial area surveyed, to build a tool that can be applied anywhere. It will provide much greater detail than has previously been available."

During the course of these conversations, all parties mentioned that *Madison's* must speak to Roger Whitehead, research silviculturalist with the Canadian Wood Fibre Centre of Natural Resources Canada, to get a federal perspective. Unfortunately Whitehead was out of the office on business in Ottawa. Instead, Mike Wulder, senior research scientist at the Canadian Forest Service was available to take *Madison's* call.

"LiDAR provides a very good model for elevations," Wulder began. "This elevation data can identify where the riparian areas are, where the streams are, so companies can determine where to put roads. On the other hand, we can also measure many attributes required for forest inventory and management planning. LiDAR provides forest inventory-like information, the technology and applications in this regard is are actually quite mature. LiDAR survey data can augment current programs which have existing data. As an example, we can use the height information from LiDAR with species recorded in an inventory to make up-to-date estimates of stand volume."

"LiDAR has proven itself to be an increasingly reliable means to incorporate into existing forest management practice," Wulder continued. "Considering all the applications the data can be used for, the process is not that expensive. Creating multiple uses for the data is where economies emerge, from engineering through to harvest block layout. At the stand level, LiDAR can now routinely produce a wide-range of forest inventory attributes, including stand heights, canopy cover, and volume. We are building a suite of information from LiDAR, we are building a sampling strategy, to catalogue tree health. For example, with the beetle kill, the laser shows how big the tree was when it was infected, which is then combined with other data.

"Federally, our interest is in characterizing larger areas with sampling rather than trying to fly a wall-to-wall coverage of Canada," said Wulder. "For example, we can fly samples over the boreal forest, or a particular forest management unit, and produce estimates of the forest resources of that area, then identify statistically justified locations [for forest management]. Sampling theory is well established and rapidly developing insights on how to utilize LiDAR. Through sampling we can report on large areas with statistically robust estimates."

With so many different groups and agencies, not to mention private companies working on spec, involved in gathering critical data on Canada's land base, one has to wonder if there is cooperation across departments and regions.

"We are already sharing data," replied Wulder to *Madison's* question. "The Canadian Forest Service, Canadian Wood Fibre Centre, and FPInnovations all have differing expertise, and we work to ensure that we all know what the other groups are doing. In fact, a key part of the work that Roger Whitehead does with the Canadian Wood Fibre Centre is to bring these groups, and industry, together to collaborate and focus on common objectives. "