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WOOD MARKETING BULLETIN

The Wisconsin DNR publishes the "Wisconsin Wood" marketing bulletin every three months. It serves the timber producing and wood using industries of Wisconsin by listing items: For sale - forest products, equipment and services, wanted - forest products, equipment and services; employment opportunities. There is no charge for the Bulletin or inserting items in it. Only items deemed appropriate to the timber producing and wood processing industries will be listed. Also the Bulletin will feature forest products utilization and marketing news, safety notes, coming events, new literature, tips to the industry, and listing or employment wanted or positions that are available.

If you know of someone who would like to be on the Bulletin mailing list, please ask them to send their name, address and zip code to the return address on the back page. Also, if you have items to list, send in the form or write a letter to the return address on the back page. Repeat listing of items requires a written request each time the item is to be repeated.

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Coming Events

Save the Date!

The **Kiln Drying Short Course** is back. August 6th through 9th, 2012 in Antigo, Wisconsin.

This workshop is packed with valuable and important information for kiln operators and managers. The variety and quality of the information make this a must attend event. The workshop will focus on drying systems, controlling lumber quality, species specific drying, wood structure and drying science. Over twenty breakout topics will be covered to help you maintain a successful kiln operation.

This fast-paced workshop will include several lab exercises to apply concepts taught in the classroom.

Who should attend? Kiln operators, purchasers, sale representatives, production supervisors, plant managers and others who deal with wood moisture related issues.

Location: Northcentral Technical College Antigo Campus, Wood Technology Center of Excellence, 312 Forest Avenue, Antigo, Wisconsin 54409

For more information Contact Continuing Education at (715) 803-1861 or (888) 682-7144, Ext. 1861 or continuinged@ntc.edu

1) Fundamentals of Hardwood Lumber Grading and Hardwood Sawlog Scaling & Grading for the Small Mill Operator

This course will give the student a basic understanding of the requirements of the hardwood lumber grades, and how to grade hardwood lumber. The course will also give the students a basic understanding of board foot log rules, and how they relate to cubic and cord scaling, how the various board foot logs rules compare to each other, the basic steps in the scaling and defecting of hardwood logs and the grading of hardwood sawlogs.

(Note: This course is designed for the small mill operator who has not had formal classroom exposure to the basics of log course is also not designed to be a training session for the production employees of larger mills.) July 17, 2012 at UW Stevens Point Wood lab. To register: e-mail the following information to RGOVETT@UWSP.EDU (e-mail is preferred if possible) Provide the following information when registering:

1) The full name (or names) of the person (or persons) being registered. 2) The company name (if different from the person's name). 3) A complete mailing address (including zip code). 4) Phone number (with area code). OR if you do not use e-mail you can FAX to : Bob Govett (715) 346-4821 OR you can simply phone

Bob Govett (715) 346-4212 –if you phone in your registration – please be sure to spell out the name and address.

2) Fundamentals of Quality Control and Quality Improvements for the Small Mill Operator

This course will give the student a basic understanding of quality control and quality improvement for the small mill operator. Topics will include sawing variation and its effect on quality and profits, how to determine sawing variation for your mill, how to calculate appropriate green target sizing of lumber, how problems with lumber sizing should be addressed with appropriate basic mill troubleshooting and alignment. (Note: This course is designed for the small mill operator who has not had formal classroom exposure to these topics. The course is also not designed to be a training session for the production employees of larger mills.) August 8, 2012 at UW Stevens Point Wood lab. To register: e-mail the following information to RGOVETT@UWSP.EDU (e-mail is preferred if possible) Provide the following information when registering 1) The full name (or names) of the person (or persons) being registered 2) The company name (if different from the person's name) 3) A complete mailing address (including zip code) 4) Phone number (with area code) OR if you do not use e-mail you can FAX to Bob Govett (715) 346-4821 OR you can simply phone Bob Govett (715) 346-4212 - if you phone in your registration – please be sure to spell out the name and address.

3) Fundamentals of Lumber Drying and Hardwood Lumber Marketing for the Small Mill Operator

This course will give the student a basic understanding of wood structure, the proper techniques of lumber drying, including both air and kiln drying and proper lumber handling and storage. This

course is designed for the small sawmill operator or a small woodworking shop that is interested in beginning to dry lumber or that has just started lumber drying. (Note: This course is designed for the small mill operator who has not had formal classroom exposure to these topics. The course is also not designed to be a training session for the dry kiln operators or the production employees of larger mills.) September 20, 2012 at UW Stevens Point Wood Lab. To register: e-mail the following information to RGOVETT@UWSP.EDU (e-mail is preferred if possible). Provide the following information when registering 1) The full name (or names) of the person (or persons) being registered. 2) The company name (if different from the person's name) 3) A complete mailing address (including zip code) 4) {Phone number (with area code) OR if you do not use e-mail you can FAX Bob Govett (715) 346-4821 OR you can simply phone Bob Govett (715) 346-4212– if you phone in your registration – please be sure to spell out the name and address.

4) Basic Business Planning for the Small Mill Operator

This course is designed for the small mill operator who is at the point of making the step beyond simply custom sawing. A key focus of this course will include how to do a basic financial feasibility analysis of a small sawmill and/or lumber drying business and how to go about developing a business plan. Other topics will include understanding inventory and how that affects financial requirements, basic measures of business performance, development of basic pro-forms income statements for sawmill and/or drying operations. A student in this course needs to have a fundamental background in use of personal computer spreadsheets or they will need to bring someone who will be assisting them in this regard. Further direct technical assistance will be available individually to all students who might wish to follow-through with making this a reality. September 27, 2012 at UW Stevens Point Wood lab. To register: e-mail the following information to RGOVETT@UWSP.EDU (e-mail is preferred if possible) Provide the following when registering 1) The full name (or names) of the person (or persons) being registered. 2) The company name (if different from the person's name) 3) A company name (if different from the person's name). 4) Phone number (with area code) OR if you do not use e-mail you

can FAX to Bob Govett (715) 346-4821 OR you can simply phone Bob Govett (715) 346-4212 – if you phone in your registration – please be sure to spell out the name and address.

HARDWOOD LOG GRADING

The State of the Industry

The following article is adopted from an article submitted by Curt C. Hassler and Shawn T. Grushecky, Appalachian Hardwood Center, West Virginia University.

In our March article we underscored the importance of log grading and scaling to the profitability of hardwood sawmills, and identified two key components to successful log inspection: the skill of the log inspector and the mill policies and specifications for log grading and scaling. An effective log grading system assigns log grades and log prices that consistently produce winners (i.e. profitable logs). To do this, log grades must accurately reflect expected lumber grade yields. But, do current hardwood log grading/pricing systems do the same? A brief history of log grading in the U.S. will help set the stage for further discussion.

A. Brief History of Hardwood Log Grading in the U.S.

The earliest references to hardwood log grading are found in the Hardwood Log Grading Rules published in 1913 by the Nashville Lumbermen's Association (Bryant 1913). Six grades were developed based on diameter and defect characteristics. Defects were specified mainly as knots and each grade had limits on the allowable quantity and size of knots. In 1915, the Southern Log Association of Memphis developed a system for grading southern hardwood logs, but little or no information exists that describes this log grading system.

In the 1930's, the USDA Forest Service (USFS) began what would become a decades-long development and refinement of a hardwood log grading system. Benson and Wollin (1938) argued that log grades should be developed from empirical mill studies and based on lumber yield results. While log grading was certainly occurring at this time, it was mostly based on regional standards, and no specific system enjoyed universal acceptance across hardwood producing areas.

Unfortunately, this state of affairs is as true today as it was then. Although some rough standards exist, their application is as varied as those making the transactions. This makes some intuitive sense in that log

buyers would naturally define log quality and value based on the markets they hope to resell into or the products they hope to produce. This is a principal reason for the multitude of mill-specific grading systems that were common then and now. The same could be said for hardwood lumber – that buyers would like to define grade by their own utility – yet the lumber industry has for more than 100 years traded around one primary grading system.

A “National” Log Grading System

Benson (1941) believed that that log grades should have more closely followed the clear-cuttings approach of lumber grades. He postulated that a grading system needed to be simple enough that those with little experience seeing logs “open up” could still assign grades in a way that the highest log grades yielded the highest percentage of high-quality lumber. To remove the subjectivity associated with identifying defects, Benson felt that the size of clear areas between defects should be the underlying basis for a log grading system – something most graders could identify. Thus, the concept of standardized log grades based on clear cuttings was initiated and 40 years worth of development commenced, primarily within the USFS.

“Grading of Northern Hardwood Logs” (Benson and Wollin 1941) became the first attempt by the USFS to develop a standardized system for grading hardwood logs based on the expected lumber grade yields. The culmination of this work was the publishing in 1949 of “Hardwood Log Grades for Standard Lumber – Proposals and Results” (Wollin and Vaughn). In 1952, the grades were adopted by the Forest Service as the organization's official hardwood log grades. This system first classifies each log by its best end use (factory lumber, structural material, and local use), then establishes a grade based on the distance between defects on the second-worst face. Log grade improves as the proportion of log length in clear cuttings improves, which is directly related to NHLA lumber grading rules for clear cuttings and lumber grades.

The last major contribution to the Forest Service's hardwood log grades was the publication of *Lumber Grade Yields for Factory Sawlogs in 1980* (Hanks et al.). This report was the culmination of 40 years of research on hardwood lumber grade yields, and incorporated the real-world results of sawing nearly 20,000 logs of a variety of species at 75 sawmills in the Eastern U.S.

Alternate Grading Systems

During the development of the USFS log grading system, several individuals and organizations modified early versions of the USFS rule – and some outright competitors surfaced – many of which argued the USFS rules were too complex and difficult to use. There is no evidence, however, that any of these systems survived and are in use today.

The only log grading system to survive over the long term has been the USFS system. However, “survive” is a loose term. The USFS log grading rules have been primarily utilized within USFS Forest Inventory and Analysis and in federal and university research. It is also the principal log grading system taught in log-grading workshops for the industry – which is ironic since it is used so infrequently in the industry.

Log Grading From an Industry Perspective

There has never been broad acceptance of the USFS hardwood log grades by the U.S. hardwood sawmill industry. In fact, in today’s marketplace, the authors have not encountered a single mill that uses the USFS researchers similarly reported no use of the USFS log grading system at 24 sawmills visited. In a 2010 survey of production costs at hardwood sawmills in the Appalachian region, none of the respondents indicated they used the USFS log grades.

For whatever reason(s), the significant investment in research work completed over several decades on log grades and lumber yields has not realistically addressed the needs of the hardwood industry. The issue is partly with the difficulty of using the USFS system and partly that the industry does not believe it adequately estimates lumber grade yields.

In response, sawmills have independently arrived at a *de facto* system of log grading that is based primarily on scaling diameter and number of clear sides (quadrants of the log circumference without visible defects), with a variety of nuances developed on a mill-by-mill basis to fine tune the grades. These nuances include admitting or excluding certain log lengths, end conditions (shake, splits, double hearts, etc.), and log position in the tree, among others. This approach mirrors Benson’s (1941) admonition that a grading system be simple enough that those with little experience could still assign grades.

Linking Log Grading and Log Pricing

Any log grading system must effectively determine the quality of lumber and cant

products to be expected from logs of varying size, species, and quality, so that prices can be established for those logs. Since we’ve already determined there is no log grading system broadly recognized by the industry, there is no universally accepted system upon which to base hardwood log prices – nor can there be a log price tracking report akin to the *Weekly Hardwood Review* for lumber.

While the *de facto* clear-sides log grading system developed by the hardwood industry allows commerce to take place, the lack of uniformity in grades between mills makes commerce more difficult because buyers’ and sellers’ grading terminology and standards are not always apples to apples.

There is no question that the hardwood industry could use a more uniform log grading system to facilitate trade and price benchmarking. Since the industry failed to adapt the more complicated USFS log grading system, it would make sense that any new system start with the *de facto* industry system that considers only the number of clear sides and log diameter. Such a system would logically and rationally distinguish logs of varying quality in a simple grid.

As one moves down and to the right in the matrix, the quality of lumber sawn from a log decreases, as should the grade of the log. Based on our experience in conducting numerous mill studies and observing the grading systems at many other mills, the grading template is a reasonably accurate reflection of the log size and clear-side delineations occurring within the hardwood industry.

This basic grading table can serve to establish the foundation for achieving the necessary commonality between mills and suppliers. It also serves as the necessary gateway to developing and reporting log prices on a regular basis as lumber prices change in the dynamic hardwood lumber marketplace.

The most accurate approach to log pricing would be to assign a price (\$/MBF) for each cell so that the price for each diameter/clear side combination reflects the expected lumber quality yield. Our experience is that certain cells in such a table have very similar lumber grade yields and price results and can be grouped into defined log grades. The matrix can thus be simplified, into a few grades, each with a unique price.

It is likely that many mills buy logs based on similar quality groupings, even if the groupings are not as rigidly defined or

clearly understood. The question mills must ask is, have they properly designated prices for each quality groupings? Are prices based on mill traditions that have developed over time? Are they based on what other mills are paying for logs? Or, are they based on known yields for the particular mill, as they should be? More importantly, how does the mill adjust log prices as changes occur in the prices of lumber and cants. Ideally, log prices should constantly adjust as lumber and cant prices changes.

Source: *Hardwood Review Weekly*, April 2012

TREE TIPS: HOW DO SAPSUCKERS IMPACT TREES

What are yellow-bellied sapsuckers?

Yellow-bellied sapsuckers are a type of avian tree pest capable of injuring trees, degrading wood quality and even causing tree mortality. Unlike other woodpeckers that feed on wood-boring insects and bark beetles, sapsuckers primarily feed on tree sap (and less frequently on insects attracted to the sap) of a variety of hardwood and coniferous tree species. As sapsuckers feed, they use their powerful beaks to excavate square-shaped to oval pits in tree bark. These injuries ooze sugar-rich sap that the sapsucker laps up with its long, specially adapted tongue. The pits made by sapsuckers are generally arranged in neat lines, most commonly extending in a horizontal direction around a tree. This damage, which is sometimes mistaken for insect holes, is a considerable stress to trees and may lead to girdling (strangling) of the tree. Damage of this type certainly leads to considerable tree stress and often predisposes the tree to secondary insect and disease agents that may very well “finish-off” the tree.

How can sapsucker injury be prevented?

While some readers may be thinking about reaching for the shotgun to solve this problem, it’s best to think twice. Causing harm – or even attempting to cause harm to sapsuckers – is a violation of the Migratory Bird Treaty Act, and is a federal offense carrying with it stiff fines and misdemeanor charges. Although there is no sure way of preventing sapsuckers from feeding on your tree, there are a number of options to deter them from causing damage. Visual deterrents such as owl decoys, or hanging reflective objects like old compact disks or aluminum pie plates from branches, have in some cases repelled sapsuckers. Wrapping the injured

portions of the tree with burlap, or other coarse fabrics may also deter feeding. Tanglefoot Bird Repellent, a sticky paste-like substance that can be applied to sapsucker feeding areas, has also been shown to change sapsucker feeding behavior. One important consideration is, sapsuckers tend to have “favorite” feeding trees. So, if a sapsucker is feeding on one of your less favorite trees, you may decide to do nothing in order to protect other trees in your area.

The mature male yellow-bellied sapsucker has a red crown and throat, both bordered with black plumage, and the mature female has a smaller red crown and a white throat. Both have white bands above and below the eye extending onto the neck, a black patch on the breast, and yellowish white abdomen.

Special thanks to Jeffrey Towner of the US Fish and Wildlife Service, North Dakota Field Office, for information on the Migratory Bird Treaty Act.

By Aaron Bergdahl, Forest Health Specialist, contact Aaron at (701) 231-5138 or e-mail -

Aaron.D.Bergdahl@ndsu.edu.

Source: *North Dakota Forest Service, The Prairie Forester*, Spring 2012

SOMETIMES IT'S THE SIMPLE THINGS: A QUICK LOOK AT LUMBER RECOVERY

Overview

In the often fast paced world that we now find ourselves working in, it has become easier to lose sight of “simple things” we can do to help our day to day operations. Even the best intentions to increase a mill’s efficiency, effectiveness, and bottom line through creative new business practices can fall short if the fundamentals get overlooked.

When most of us make a purchase – be it for groceries, clothing, or any number of products we might consider, we have an intuitive sense of whether we got a “good deal” or a “bad deal.” Simply stated we ask: did I get the biggest bang for my buck? You can (and should) be asking the same question each time your mill purchases logs for milling. While this may seem obvious, you might be surprised to know that not everyone does it. So what are we talking about?

Consider the following example. A mill purchases the logs it needs for day to day operations and the desired products it will produce. For the purposes here, we will assume that the end product is sawn

lumber. How does a mill know whether it got the biggest bang for its buck? There are two ways to address this question. These are Overrun and the Lumber Recovery Factor. Depending upon which measure you use and your mill’s operations, you might get different answers to the same question.

Overrun

Overrun is defined as *the volume of lumber that is actually obtained from a log in excess of the estimated volume of the log, based on a given log scale*. In other words, the logs arrive at the mill and get scaled. Once they have been sawn, the actual volume of lumber recovered is measured. If the volume of lumber recovered is better than what the mill had scaled, we have a percentage overrun. By the same token, if the volume of lumber recovered is less than what was expected it is called underrun (not good).

Lumber Recovery Factor

The Lumber Recovery Factor (LRF), on the other hand, is defined as *the volume of lumber recovered in board feet per cubic foot of the log processed*. The LRF can provide hints about your processing efficiency that overrun cannot.

Putting it together

So what are the differences and how do they impact my mill? If we look at how each is calculated by formula we have:

$$\text{Overrun} = \frac{\text{lumber tally} - \text{log scale} \times 100}{\text{log scale}}$$

$$\text{LRF} = \frac{\text{board foot lumber tally}}{\text{cubic foot log scale}}$$

Overrun helps you compare what you paid for your logs when accounting for the lumber sold. It can help you measure if you got a good deal on the logs you bought based on the scale and products you use and produce, respectively. However, care is needed when interpreting overrun because of the nuances and variability among different log rules. Overrun is heavily influenced by the log diameters under consideration. Considering just log diameter, overrun will increase as log diameters decrease. The Lumber Recovery Factor is a better measure of sawmill efficiency. Because the LRF is calculated using the nominal lumber size when measuring the recovery of your inputs, the LRF reflects quality of sawmill equipment, mill design, operation and even maintenance. The LRF is also influenced by log diameter, but not as much as overrun using log rule Scribner Decimal C

for example. Keeping mind that LRF will also vary with the products a mill produces due to kerf size and other variables.

In summary, it is always wise to know what you are paying for and what you can expect your return on that investment to be. Overrun tells you how well you did on a timber sale or payment for a particular load of logs. This method is very dependent on the log scaling diameter and is not really a good measure of your sawmill’s performance. The Lumber Recovery Factor, on the other hand, is a better indicator of how efficiently or efficiently a sawmill is operating from a production standpoint. It can provide insights to sawmill improvements that in turn can help improve bottom lines. By Steve S. Hubbard, a Forest Products Specialist for the Wisconsin Department of Natural Resources Division of Forestry The author wishes to acknowledge John “Rusty” Dramm, Forest Products Utilization Specialist, State and Private Technology Marketing Unit, Forest Products Laboratory, for his insights and informative material which appears in this article.

TYPES OF HARDWOOD LUMBER INSPECTION OFFERED BY NHLA INSPECTION SERVICES

My travels, both domestic and foreign, have afforded me insight into some apparent confusion when it comes to the different types of lumber inspections offered by NHLA. At this time I would like to explain each type in detail.

Lumber Inspection: The first and most widely used of the different types.

This definition is applied when a NHLA National Inspector is called and asked to fill-in for a company’s lumber inspector, to spot check inbound or outbound lumber, to conduct re-certification/certification on a facility or inspect lumber for any purpose that does not fit into the next two categories. When inspecting in this manner all results from the inspections are unofficial and not financially guaranteed by NHLA.

Original Inspection

This is ordered when a shipment is to be inspected by a NHLA National Inspector and the grades and footages contained within a shipment are written on an official NHLA Inspection Certificate and can be performed at point of origin or destination.

This type of inspection can be guaranteed by NHLA if certain conditions are met. This type of inspection may be

called in place of a dispute inspection if both buyer and seller agree in writing.

“Section 3: When a shipment of lumber is received under an order which did not require an Original Inspection, the buyer shall cause the shipment to be inspected and measured. If an unsatisfactory difference exists between the amount of seller’s invoice covering the shipment and the value of the shipment computed from the buyer’s measurement and inspection, the buyer shall hold the entire shipment intact and report this difference to seller within fourteen days after unloading the shipment and furnish seller with piece tally, unless buyer and seller agree otherwise. If it be impossible to adjust such difference by compromise, an authorized National Inspector of the National Hardwood Lumber Association shall be called to inspect the lumber under dispute.”

Section 4: If the buyer and the seller agree in writing, the application to the Chief Inspector or to an authorized National Inspector may request that the lumber he inspected as an ‘Original Inspection’ under the Original Inspection Regulations and the Re-Inspection Regulations and the Financial Guarantee of the Association shall apply on the terms and conditions therein provided. The buyer and seller must agree in writing that the Original Inspection is to be binding on the parties.”

Dispute Inspection:

A dispute inspection is just as its name implies, an inspection arising from an unresolved difference between buyer and seller.

In resolving a dispute inspection an official agreement is to be signed by both parties and the results of the inspection performed by the NHLA National Inspector is final. Below are sections taken from “Article X – Inspection” of the “Sales Code” on page 85 – 86 of the 2011 version of the NHLA Rules book that explains the Dispute Inspection terms:

“Section 6: If the result of the dispute inspection reveals that less than 80% of the total footage in the shipment is in accordance with the specification of the order, the seller shall reimburse the buyer for any freight paid by the buyer on the shipment, and the shipment shall be held for the disposition of the shipper, who is to pay all expenses of the inspection and labor charges at actual cost or at the rate of \$15.00 per M feet, whichever is less.”

“Section 7: If the result of the dispute inspection reveals that at least 80% of the

total footage in the shipment is in accordance with the specifications of the order, then the total value of all lumber of the species ordered, as revealed by this dispute inspection, is to be calculated, using prices shown on the order and recognized price differentials for other items of the species ordered.”

“Section 8: Should this dispute inspection result in not more than 4% deductible difference in money value from the gross amount of the invoice, the buyer is to pay all expenses of the inspection, accept all lumber and honor the sellers’ invoice in full. If the deductible difference be more than 4% money value the seller is to pay all expenses of the NHLA inspection and labor charges at actual cost or at the rate of \$15.00 per M feet, whichever is less. The seller shall invoice for the buyer shall retain and pay for all items reported on the dispute inspection certificate of the species and thickness ordered. All other items shall be held for the disposition of the shipper.”

As you can see there are several options that can be utilized when it comes to the NHLA Inspection staff. We are here to help the hardwood industry in any way we can and there are proper avenues one can take in resolving lumber inspection issues should they arise.

For further clarifications on this article or any other article I have written, please feel free to contact me. Dana Spessert, NHLA Chief Inspector, can be reached by e-mail at d.spessert@nhla.com or (901) 399-7551.

Source: *Hardwood Matters*, May 2012

DNA TRACKING BRANCHES OUT **Tree DNA is now being used to address illegal logging issues**

In April 2010, a Washington man was sentenced to 18 months in federal prison for stealing several old-growth maple trees from the Hood Canal Ranger District in Washington. The high-value wood was to be used in musical instruments. A sawmill worker suspected the wood had been harvested on National Forest land and not on private land, as stated in a forged permit.

DNA Fingerprinting

Cases like this may benefit from a new technology emerging from Australia’s University of Adelaide that uses advances in DNA ‘fingerprinting’ of trees to make it harder for timber thieves to succeed. The DNA technique can be used to trace individual logs or wood products back to the forests of their origin.

“DNA fingerprinting allows individual trees to be uniquely identified genetically and is useful for following particular logs or large timber products along a supply chain where documents can be falsified”, says Andrews Lowe, director of the Australian Centre for Evolutionary Biology and Biodiversity. Lowe says it is now possible to extract and use genetic material from wood products and samples of old wood.

“We can use DNA to identify tree species and DNA to identify and track individual logs or wood products, and we can verify the geographic region the wood came from,” Lowe says. “We will never be able to get DNA out of paper products but we are able to routinely get DNA out of wood products like decking.”

Lowe said large-scale screening of wood DNA can now be done cheaply, routinely, quickly, and with a statistical certainty that can be used in court. The DNA method can be applied at ports of entry to address the import/export of timber obtained through illicit means. Lowe estimates 10 percent of wood imported into Australia consists of illegally traded timber, harvested outside designated logging areas or environmental controls.

Commonly used checks (such as chain-of-custody certification) in place in the field to monitor the flow of legal as well as illegal timber are vulnerable to falsification, particularly between logging concession and mill, where most illegal logged timber is inserted into the supply chain.

“Certification documents can be falsified, DNA cannot,” Lowe says.

Lowe says DNA fingerprinting can be used by suppliers to check supply chain integrity or by importers to check species or region of origin. With Lowe technique, DNA is extracted from logs sampled at logging concessions, and a unique genetic fingerprint is generated using 14 DNA segments, called microsatellite markers.

The first company to commercialize the DNA technology is a Singapore firm called DoubleHelix Tracking Technologies, which has marketed a DNA fingerprinting system to check the integrity of timber supply chains since 2007. Lowe is chief scientist for DoubleHelix.

DoubleHelix spokesperson Jonathan Geach says they can extract DNA from kiln-dried timber products like tables and chairs and match this back to samples taken earlier in the supply chain or from pre-existing genetic maps.

“We have extracted DNA from a 500-year-old shipwreck,” Geach says.

Hot Logs

The scope of the timber theft problem ranges from nuisance to malevolence on an international organized-crime scale. In July, the Vietnamese military was implicated in a multi-million dollar timber operation that smuggles threatened timber over the border from the shrinking forests of neighboring Laos.

Some estimates suggest that illegal timber may account for one-tenth of the global timber trade, worth maybe \$150 billion a year. One conservation group believes more than half of all logging activities in vulnerable regions, like the Amazon Basin, Central Africa, Southeast Asia, and parts of Russia, are illegal.

In the U.S., the Forest Service estimates one of every ten trees harvested in national forests is taken illegally. According to a 2008 Congressional Research Report, private companies claim three percent of their trees are stolen, amounting to losses of \$350 million annually.

Timber theft in the Northwest seems to be mostly of the nuisance variety, but as the Hood Canal incident illustrates it does exist. Quick profit is the incentive. Old growth timber, most popular among thieves, can net a \$5,000 profit from a single tree.

“Timber theft is as much a crime as any other theft,” says Lauren Fins, of the department of Forest Ecology & Biogeosciences at the University of Idaho. “If using DNA identification helps to reduce or stop the stealing, it seems a worthy technique to use.”

Fins says if timber companies or government agencies routinely identify their stands genetically, especially old growth hardwoods that are vulnerable to theft, it is less likely wood will be stolen and if it is, more likely the perpetrators will be caught.

“If multiple genetic markers are used, the probability of misidentifying logs or wood would be very low,” she says. “For species that are highly genetically variable, it might even be possible to pinpoint the exact population sources of the wood. Genetic markers would be pretty damning evidence for anyone caught with the logs and the products”

One forensic method the Forest Service currently uses is to mark the boles and stumps of trees to be harvested with paint containing unique chemical tracers whose formulation is a closely guarded secret,

according to Dennis Dykstra, a retired Forest Service scientist.

“Laboratory identification of the tracers is highly reliable and has been used in court as proof of illegally harvested trees,” Dykstra says.

Jeff Stringer, of the Department of Forestry at the University of Kentucky, says the use of DNA would improve the ability to successfully prosecute timber theft, since local law enforcement generally does not have tools or resources necessary to track timber movement from stump to processor.

“The use of DNA sample collection from the stump and then subsequently from logs on a deck, satellite yard, or primary processor yard would aid in this,” says Stringer.

Shelley Gardner, a U.S. Forest Service policy analyst, sees the DNA technique being useful not just for government enforcement but also for regulatory compliance in the private and public sectors. Gardner said when wood is seized (such as happened in August when during an investigation federal agents confiscated imported hardwood from the Gibson Guitar company in Nashville) and there is a question as to which species it is, the wood would first go to Forest Service wood anatomists.

“But in cases where it’s important to know the wood’s country of origin, in theory DNA could complement the wood anatomy method,” Gardner says.

Out of the Woods

In 2007, Australian companies became the first in the world to purchase wood products that use timber DNA fingerprinting as part of proof of legal origin.

DoubleHelix is well established in Asia and will soon expand to the Congo Basin. There is also growing interest in the U.S. in stopping illegal logging. The 2008 farm bill (P.L. 110-234) amended the 1900 Lacey Act to make it unlawful to import plants harvested or taken illegally in areas outside the U.S. This was primarily intended to deter imports of illegally obtained timber from foreign countries.

One of the problems is timber is moved around the globe, making it difficult and expensive to identify foreign species properly.

“Falsification of documents certifying origin is rampant,” Lowe says. Lowe believes a precise DNA reference standard that crosses political and geographic boundaries would help manage and identify valuable forest assets.

He adds, DNA has the potential to provide a universal standard to identify all specimens of a timber species no matter how far the timber is carried.”

By Douglas Page, Source: *Timber West*, March/April 2012

ASHLEY FURNITURE TO OPEN BIG PLANT IN NORTH CAROLINA

Advance, North Carolina – Ashley Furniture will open a large-scale furniture factory near Advance, North Carolina in Davie County. An initial \$825,000 grant from the State of North Carolina helped spur the deal, which could lead to a total \$80 million investment and a plant totaling 3.3 million square feet.

“As we see Ashley’s global demand for its products increase, Ashley continues to make long-term investments in all of its facilities as well as the continued education of all employees to meet consumer demand,” said Todd Wanek, Ashley Furniture president and CEO, in a statement announcing the initiative.

Under the terms of a separate Job Development Investment Grant, Ashley Furniture will receive a grant equal to 60 percent of the state personal income withholding taxes derived from the creation of new jobs for each of the 10 years in which the company meets annual performance targets.

If the 12,000-employee furnishings manufacturer sustains them for 10 years, it could yield as much as \$3.19 million in maximum benefits for Ashley Furniture, according to calculations by North Carolina Governor Bev Perdue’s office.

The project includes the conversion of a vacant building on a former R. J. Reynolds property into a warehouse, and later expansion facility over the course of five years. Total investment in land, buildings, machinery and equipment could be \$80 million.

Speculation about the Ashley Furniture project has been fed over the last year by several news reports: a \$3.5 million 360-acre land parcel was donated to the Davie County Economic Development Corporation by R. J. Reynolds last year. “Operation Top Drawer,” for a then unspecified furniture manufacturer, was funded by the Golden Leaf Foundation last year, which secured a \$2.5 million grant to support the project. The State of North Carolina passed a tax credit of \$168,000 in June 2011 for an unnamed 550-employee manufacturing plant.

Established in 1999, the Golden LEAF Foundation was created to manage part of

North Carolina's share of funds from a settlement with tobacco companies, helping economically distressed rural communities in North Carolina transition to stable business segments. Stanley Furniture received a \$1 million grant from the Golden Leaf Foundation to retool its Robbinsville, North Carolina plant.

Ashley Furniture Industries, Inc., says it is the largest furniture manufacturer in the United States. Its Ashley Furniture Home Stores claims to be it is the number one furniture retailer in the United States, through over 425 independently owned locations in the United States, Canada, Mexico, Puerto Rico and Japan. Source: Find this article at <http://www.woodworkingnetwork.com/news/woodworking-industry-news/Ashley-Furniture-To-Open-Plant-in-North-Carolina-148166176.html>

SELECTED FURNITURE MOVES **CHINESE PLANT, HQ TO INDIANA**

Restaurant furniture maker Selected Furniture announced it is moving its Chicago-based operations and Chinese commercial-grade wood manufacturing plant to Starke County, Indiana.

Selected Furniture said it will invest \$1.2 million to purchase and revamp the 200,000 square foot facility at 1001 W. Culver in Knox, IN. The company was offered up to \$425,000 in conditional tax credits by the Indiana Economic Development Corp. plus granted additional property tax abatement by the Knox City council. IEDC also offered Selected Furniture up to \$87,500 in training grants, based on its job creation plans. According to a statement, the company has already begun to hire woodworkers, upholsterers, finishers and other personnel; the economic development agency said the move is expected to create 100 new jobs in Indiana by 2004. Prior to the announcement, Selected Furniture had approximately 120 employees nationwide; the figure for employees at the Chinese facility was not readily available.

Founded in 2003, the vertically integrated company manufactures wood components at a 100,000 square foot factory in China, which are shipped to the 200,000 square foot assembly and ware house plant in Chicago. The company also has a 75,000 square foot assembly where it manufactures tubular metal parts. Additional distribution centers are located in Jacksonville, FL and Los Angeles, CA.

Among the product manufactured for the hospitality industry are wood and metal

chairs, bar stools, seating booths, and veneer, laminate and solid wood tables, the latter of which are already manufactured in the United States.

Source: Wood & Wood Products, May 2012

ON THE PATH TO THE FUTURE: **NANOTECHNOLOGY**

Wood has so many benefits. It's multi-functional, transforming into something as large as a house or as small as chemical compound. It is reusable, renewable, and recyclable. Wood is a source of heat and a source of food. It's abundant, comes in a wide variety of species, and can regenerate naturally. It is not perfect though.

Wood is plagued by insects and diseases. It can rot, lose its resilience, and succumb to weather phenomena. It can negatively react to light, moisture, and heat. And like all of us, it can buckle under too much pressure.

But what if, on a scale too small to see, wood properties could change to repel mold and moisture, resist fire and weathering, and/or increase its dimensional stability and strength? Impossible? Think again.

Nanotechnology defined

Wood, along with a myriad of other substances and products can and already do benefit from a technology that surprisingly, isn't so new.

Nanotechnology is the study of material behaviors at the nanoscale, which is between 1 and 100 nanometers. To give this perspective, a nanometer is one-billionth of a meter, infinitesimally small. At this scale, the properties of wood can react differently than on a scale visible to the naked eye. Any material in a gas, liquid or solid form can show unique physical, chemical and/or biological properties on the nanoscale that are not exhibited at other scales.

At the nanoscale, wood can become stronger and more flexible, decay and UV light resistant, and change the way cellulose and its components are extracted, remolded, and processed into a final product. Not only can this be altered, but in the future, it may take place with the use of less water and energy while producing a light-weight product with more load strength.

Evolving science

In the future, it is conceivable that wood products could have built in sensors that "measure the forces, loads, moisture levels, temperature, pressure, and chemical emissions, as well as detect attack by wood

decay fungi and termites." Because wood is already used for a diverse range of products, this could open the door to using nanotechnology for secondary wood products, such as: pharmaceuticals, cosmetics, health aids, automotive parts, cork, and adhesives. This technology could lead to new products and processing techniques due to the characteristics displayed at the nanoscale.

The potential is so big, groups of stakeholders need to converge and determine the direction nanotechnology will take in the wood industry. Also to be considered is the ability of the wood industry to adopt and/adapt nanotechnology already developed by other industries and apply it to wood processes and products.

New products

You may think you have never heard of nanotechnology, but with 30 years of intense research, products are already on the market and you may be using one or more. How about the ipod nano which holds 16 gigabytes of memory and fits in the palm of your hand? Almost all high-tech electronics created in the past 10 years use some nanomaterials. In addition, there are automotive parts, health and fitness aids, cleaners, sun screen, and adhesive products created with nanomaterials.

Pick up a clothing catalog and see the type about stain and water repellent items that breath. Nanotechnology can be thanked for that. Hull and decks of boats are now being made out of ultralight, but higher strength materials that increase performance. Plus, watercraft looks sharp in the water due to the shiny finishes now available.

Old is new

Nanotechnology is nothing new. It has been used for hundreds of years. In the fourth century, Romans used gold and silver particles to create cups that appeared to be an opaque green color when light was shown into the glass from the outside, but red and translucent when the light was shown from inside the vessel radiating outward. However, it was not until microscopes were available to see on this small scale that research in this realm took off.

We are no longer on the cusp of inventions, but galloping in all directions at once, multiplying the myriad of uses for nanotechnology. Emerging technology shows the health and fitness field alone has 738 products on the market worldwide. The United States leads the way with

almost 600 various product developments, but Europe is not far behind.

The up side.

The technology has a huge potential in the wood products sector, particularly the construction arena. Creating lighter weight but more structural sound materials would create less costly housing construction. The ability to repel moisture, reduce weathering, and fight decay would solve a host of problems the industry and homeowners have battled since its advent. In the future there could be “smart” products that would sense the build-up of moisture or the invasion of decay, fungi, or insects. This technology could allow photovoltaic cells to be imbedded into the wood, creating another source of energy generation.

The down side

Of course, there is a catch. Unknowns loom on the horizon. The health risks are not quantifiable yet and there is the possibility that some nanoparticles could be toxic at the nanoscale. And, it is a real possibility this technology could be used to create bio weapons or other terroristic materials. Other problems are the inconsistent ability to produce materials required on a large scale while maintaining the quality of the product.

But the farther researchers delve, the more information will move from the realm of the unknown to the known. Maybe we’ll be better off economically and biologically because of it. By Mimi Barzen, Source: *The Market Place*, DNR Forestry, St.. Paul, Minnesota, Winter 2012

HERMAN MILLER CLOSING NEMSCHOFF CHAIR PLANT

Sioux Center, Iowa – Herman Miller Inc. will close the Nemschoff healthcare chairs plant that it acquired in a deal finalized in January 2011 and move production to Sheboygan, Wisconsin

The closing will result in the loss of 111 jobs staged in increments throughout the summer, according to ABC affiliate KSFY TV.

WHBL reported that Sioux Center’s loss is Sheboygan, Wisconsin’s gain. Up to 45 jobs will be added at the Nemschoff plant there. Sheboygan Mayor Terry Van Akkeren was quoted, “I’m looking forward to having more jobs here in Sheboygan for the citizens.”

Nemoschoff was founded in 1950, Herman Miller initiated a buy-out of the Sheboygan-based healthcare furniture company in 2009 in an effort to grow its presence in that market. Last year Herman Miller finalized the payment on that deal, spending \$3 million to settle buyout obligations and eliminate remaining contingent payments based on sales of the acquired medical chain business.

By Rich Christianson, Source: *Woodworking Network*, June 2012

BUILDING A BETTER WOOD PRODUCTS BUSINESS

America’s woodworking industry is indeed seeing a resurgence in business. Each week we hear of more manufacturers that are expanding, such as Ashley Furniture or KI, or those like Selected Furniture that are bringing business back to North America from overseas – all new since late April.

And the list goes on. In the June issue of *Wood & Wood Products*, Associate Publisher Bill Esler discusses not only the reasons behind this growing trend, but also the increased value being placed on domestically produced products. “Made in America gained popularity as mainstream media recognized the critical part played by U.S. manufacturers in restoring the U.S. economy to financial health,” he said in a recent blog posted on WoodworkingNetwork.com.

Doing their part to spur the economy, wood products companies continue to find innovative ways to remain competitive – and make a profit. Featured in the June issue of *Wood & Wood Products*, **Northland Forest Products, Inc.**, a manufacturer of lineal mouldings and hardwood dimension invested more than \$1.4 million in technology in just the past 30 months to increase productivity and grow market share. These and other efforts by the Shakopee, Minnesota based company, founded in 1979 by Dick and Shari Pyle, have helped Northland Forest

Products grow during the economic downturn – without laying off any full-time employees.

Another successful strategy is that of Holly Springs, North Carolina – based OFM Inc., a supplier of office and educational furniture. Founded in 1995 by Abel and Barbara Zalberg, OFM has had 17 years of continuous growth contracting with OEMs in Taiwan, China, Mexico – and just recently OEMs in North Carolina. What also distinguishes OFM is that it is completely carbon neutral. The company installed a 1,042 solar panel farm on its roof in 2010, and is in the process of adding a second one, to be completed later this year. Energy from the solar farm is sold to Progress Energy, a Raleigh-based power company.

Although diverse in nature, what these two businesses have in common is their commitment to growing the U.S. economy by providing quality product to American consumers. Another commonality is their commitment to improving the workplace environment, and in turn enhancing the lives of their employees. For example, Northland Forest Products President Dick Pyle not only provides lunch for his staff every Friday, but cooks it himself. “I’ve done this for about 20 years,” he said. “Our people are the strength of Northland – they’re what win the (business) for us.” Employees also are given numerous opportunities to grow their knowledge of the company, and of the industry.

OFM has put a name to its employee empowerment: OFM University. Available to all employees, OFM University offers classes and lectures on cross-training opportunities, business operations and other topics of interest: product sourcing, retirement planning, photography/graphics, etc. According to CEO Blake Zalberg, OFM University is part of the company’s Ownership Thinking initiative, developed to build employee morale and encourage them to be active participants in the company’s success.

By Karen M. Koenig, Source:
Woodworking Network, June 2012

THE NEXT BIG THING

A 16-Year old Grade 12 student in Canada wins a national biotechnology award for her research on nanocrystalline cellulose, uncovering its potential as a powerful antioxidant ingredient for healthcare products.

Canada's next big technological and health breakthrough might come from cellulose, which is made up of tiny nanoparticles called nanocrystalline cellulose (NCC) that are measured in thousandths of the width of a human hair.

Only recently discovered, Waterloo's (Ontario) 16-year old Janelle Tam is the first to show that NCC is a powerful antioxidant and may be superior to Vitamin C or E because it is more stable and its effectiveness won't diminish as quickly.

Janelle's research earned her top honors in the South Western Ontario regional finals of the Sanofi BioGENEius Challenge Canada, a national biotechnology research competition.

"NCC is a non-toxic, stable, soluble in water and renewable, since it comes from trees," says Janelle, a Grade 12 student at Waterloo Collegiate Institute.

"NCC has many unique properties: stronger than steel but flexible, durable and ultra-light. Its potential uses are virtually limitless. Canada's national forest research institute, PFInnovations, predicts a \$250 million dollar market in the coming decade.

The world's first large-scale NCC production plant, CelluForce, opened in January at Domtar's pulp and paper mill site in Windsor, Quebec Canada. NCC is extracted from cellulose using a chemical process similar to that used in pulp mills.

Trials integrating NCC into the manufacturing process of different products are currently taking place through technical collaboration agreements between CelluForce and

15 companies based in Canada, the United States, Europe and Asia in four main industrial sectors: paints and coatings, films and barriers, textiles, and composites.

Now, thanks to the hard work of a young researcher, NCC could make its way into the billion dollar healthcare industry.

"NCC is really a hot field of research in Canada," says Janelle, who notes that antioxidants have anti-aging and health promotion properties, including wound healing since they neutralize "free radicals" that damage or kill cells.

Janelle chemically 'paired' NCC with a well-known nanoparticle called a buckminster fullerene. These 'buckyballs' (carbon molecules that look a soccer ball) are already used in cosmetic and anti-aging products, he says. The new NCC buckyball combination acted like a 'nano-vacuum,' sucking up free radicals and neutralizing them.

"The results were really exciting," she says and especially since cellulose is already used as filler and stabilizer in many vitamin products. One day those products may be super-charged free radical neutralizers thanks to NCC, she hopes.

Dr. Yao was deeply impressed by Janelle's hardworking, creative thinking, organization and presentation skills. "It was a pleasure to have her in my lab since Janelle is not only a task-orientated young lady, also she also gets along very well with others."

Janelle says she loves the independence and opportunity to do original research that the Sanofi BioGENEius Challenge offers. She hopes to become a medical doctor and researcher.

The Sanofi BioGENEius Challenge Canada (SBCC) is a national, biotechnology research competition that encourages high school and CEGEP students to pursue future studies and careers in the exciting field of biotechnology.

Source: *PagerAge*, May/June 2012

FOR SALE

Timber and Forest Products

Equipment

2003 Chevy tilt bed truck – wench – 6 speed overdrive – Jarr Dan aluminum body – low mileage - \$14,000; 1993 top kick dump/flat bed truck , 6 cylinder – Cat diesel – 16' bed – 2 speed rear \$8,000; Dny-weld – 10 ton – construction trailer \$4,000; Clark – 8,000 pound fork lift – air tires \$4,500; Cat – D – 3C bulldozer - \$15,500; Buss – double sided 30" planer - \$5,900; Hempel – tracing lathe and sander - \$8,000; TOS – 18" (4) sided planer \$12,500; Schiavie – (6) head moulder \$13,900; Mattison – straight line rip saw \$5,500; Oliver – 94D – cross cut chop saw – hydraulic \$1,900; Sanding master – 42" twin head wide belt sander \$5,900; Wadkin – 30" disk and spindle sander \$4,500; Wadkin – 20" band saw \$2,100; Wadkin – chisel mortise \$1,600; Centaurio – baseball bat – tracing lathe – hydraulic \$15,500. Contact Fred Janik, 6881 Minnick Road, Lockport, New York 14094, Phone (716) 433-4224.

Slightly used fas trac model #307 left hand band blade sharpener. For immediate shipment. Sharpens 2 ½" to 7" wide bands – for blades 20 foot lengths and under. Contact Harry R. Schell, Inc., 601 West Park Street, Blue River, Wisconsin 53518; Phone 1-800-462-5807; e-mail-hirschell@mwt.net . Also visit our new website at www.schellsaws.com and check out our monthly sale items!

Services for Sale

Announcing our new narrow bandsaw blade sharpening service, besides our experienced circular, wide band and carbide sawblade repair! Contact Harry R. Schell, Inc., 601 West Park Street, Blue River, Wisconsin 53518; Phone 1-800-462-5807; e-mail hirschell@mwt.net. Also visit our new website at www.schellsaws.com!

Veneer logs – hard maple, red maple, black and white ash, white and yellow birch, red oak, white oak, basswood, butternut and walnut. Contact Ted Fischer, Ike International Corporation, 500 Maple East Street, Stanley, Wisconsin 54768, Phone (715) 644-5777; Cell (715) 577-7975 FAX (715) 644-5786; E-mail ted.fischer@ikeinternational.com

21324 USH 151, Valders, Wisconsin 54245. (920) 775-4663. E-mail - denise@kruegerlumber.com

WANTED TO BUY

Timber and Forest Products

Small diameter white cedar logs, 2” to 4 ½” tops, 100”, hand-cut. Will consider buying fresh cut or seasoned logs. Contract Jim Steinlicht, Rush Creek Lumber, P.O. Box 801, Owatonna, Minnesota 55060. (507) 451-2721 Extension 2 e-mail – jim@rushcreeklumber.com

Equipment

Employment

Timber/Log Buyer: Seeking a qualified person to mark and purchase standing timber and cut logs. Strong communication skills, good organizational skills and must be able to work independently. Experience a plus. Competitive compensation package and benefits package. Send resume to : Krueger Lumber Company, Inc.,

If you want to list items, fill in the form below:

FOR SALE WANTED TO BUY SERVICES EMPLOYMENT
FOREST PRODUCTS FOREST PRODUCTS FOR SALE AVAILABLE REMOVE FROM
EQUIPMENT EQUIPMENT WANTED WANTED MAILING LIST

NAME ----- DATE -----
ADDRESS-----COUNTY -----
CITY ----- ZIP CODE -----PHONE AC (----) -----

WISCONSIN LOCAL-USE DIMENSION LUMBER GRADING

A procedure is in place under which Wisconsin sawmills are able to produce dimension lumber that may be sold without a grade-stamp issued under the authority of a lumber grading bureau, and that lumber may be used in residential construction when directly sold to the person who will inhabit the dwelling (or to a person acting on his or her behalf) and for whom a building permit has been issued. To do this someone from the mill must attend one of the **Wisconsin Local-Use Dimension Lumber Grading Short-Courses** that are offered for Wisconsin sawmill operators. These one day special short-course training sessions are offered several times a year, at no charge, and are advertised in the WI-DNR's Wisconsin Woods Marketing Bulletin. **Successful completion of this course and successfully passing an associated test is required for anyone that wishes to produce and sell local-use dimension lumber in Wisconsin that will be used in residential construction. This means someone in your company needs to attend the course if you wish to produce Wisconsin Local-Use Dimension Lumber. (Note: Local-use dimension lumber is lumber that is not grade-stamped under the authority of a grading association.)**

If you wish to produce and directly sell Wisconsin Local-Use Dimension Lumber that may be used in residential construction, you will need to get someone from your mill to a course so they be certified (as a representative of your mill). Also if you do custom sawing for anyone who wishes to use the lumber in their dwelling (such as if you have a portable mill and are custom sawing logs for forest landowners who want to use that lumber in building their home), this would apply to you and you also should get the training and get certified.

The next one-day Wisconsin Local-Use Dimension Lumber Grading Short-Course that you can register for will be offered on October 4, 2012 at the University of Wisconsin-Stevens Point Wood Lab in Stevens Point WI. The short-course is one day in length, beginning at 9:00 AM and ending at around 4:30 PM (at the latest).

There will be no fee for attending - HOWEVER - pre-registration is required – there will be NO WALK-IN REGISTRATION - (space is limited to 20 persons maximum for each course to allow for more interactive discussion). Pre-registration for the course must be received before for September 15th to permit time to confirm registrations, and for mailing all students a grading manual for advance study, and travel directions and other materials.

To register for any of the short-course, you may email, FAX or phone in your registration. Your registration will be confirmed (also by email, FAX, mail or phone) OR you will be informed the course is full.

TO REGISTER:

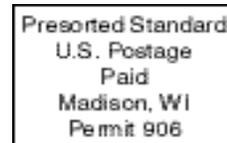
Email the following information to: RGOVETT@UWSP.EDU (email registration is preferred if possible)

Provide the following information when registering:

- 1) The full name (or names) of the person (or persons) being registered
- 2) The company name (if different from the person's name)
- 3) A complete mailing address (including zip code)
- 4) Phone number (with area code)

OR if you do not use email you can FAX to: Bob Govett 715-346-4821

OR you can simply phone Bob Govett (715-346-4212) – if you phone in your registration – please be sure to spell out the name and address



Department of Natural Resources
Forest Products Specialist
3911 Fish Hatchery Road, Route 4
Madison, WI 53711

ADDRESS SERVICE REQUESTED

The Wisconsin Department of Natural Resources reserves the right to edit all items included and accepts no responsibility for the accuracy of description or for the commercial integrity of the persons or firms making offers in this Bulletin.

If you wish to use the facilities of the Bulletin, forward a letter, post card or form on page 11 with detailed description of your "wanted" or "for sale" items. All forest products (stumpage, logs, pulpwood, posts, poles, trees and lumber, etc.) and services (custom sawing, custom kiln drying and tree planting, etc.) may be listed. Please be sure your full name, address (including zip code), telephone number accompany your listing, there is no cost for listing any items. If you want items repeated in the next issue, send in a written request. If you have comments about the Bulletin or have suggestions on its content, write to: Forest Products Specialist, 3911 Fish Hatchery Road, Fitchburg, WI 53711, phone (608) 231-9333 FAX (608) 275-3338.

DEADLINE FOR ITEMS TO BE LISTED IS THE 20TH OF: MARCH, JUNE, SEPTEMBER and DECEMBER.



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