

THE VOICE OF THE TIMBER INDUSTRY

# TIMBER BULLETIN

DULUTH, MINNESOTA

JANUARY/FEBRUARY 2005

VOLUME 61



Senator Norm Coleman  
on Industry:  
Whatever It Takes

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# TIMBER BULLETIN

Volume 61  
January/February 2005  
Duluth, Minnesota

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### ON THE COVER

Senator Norm Coleman on Industry:  
Whatever It Takes.

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# Hedstrom Lumber Gets the Lead Out

by Maureen Talarico

The days getting longer remind us that spring is coming. If you are like me, it seems we have much to do yet. It also seems this has been a winter of unusual weather patterns. No snow early, lots of snow later, extreme cold temperatures and

## President's Column



now, unusual warm spells. The new year also means Minnesota Timber Producers Association dues are payable.

Thanks to all of you who have sent them in. Your support ensures that we will continue to be a strong voice for the industry. We have to have a presence at the legislature, with the Department of Natural Resources, with the U.S. Forest Service, with the counties, and with the consuming mills. Membership also gives access to the TPA-sponsored programs LUA, drug testing, truck driver workshops, and others.

Again, thank you for your support and please work safely.

*Dave M. Eriksson*

Things are running smoothly at Hedstrom Lumber in Grand Marais, thanks to a new high-tech piece of equipment. The new Techtronics Whole Log Metal Detector is helping Hedstrom's be more productive and save equipment and injuries. The detectors are commonplace in sawmills around the country, but not in the Lake States region. When metal is detected, the whole operation shuts down and won't feed in any more logs until the suspect log is backed out, then a hand metal detector is used to go over the suspect log more closely. Hedstrom Lumber needed the equipment because the company has seen more and more nails and iron in the wood. "It comes in and if you saw into it and it's a big enough iron - it could be a nail, we've hit horseshoes, we've hit lots of telephone insulators - it could

rip the saw off the wheel; anywhere from just damaging some teeth - so we have to stop operations to change the saw - to actually ripping a saw or blade apart."

Hedstrom Lumber started using the new detector in early November, and so far has gotten its money's worth. "We're finding metal, and are able to take that metal out, before the saws find the metal. So it's been working well." There was more than just a substantial monetary investment in the new German-built equipment. Hedstrom Lumber decided to update some of the existing infrastructure at the mill at the same time. "We set out to do several things, one is detect metal in our logs, improve the ergonomics in the debarker cab, to smooth and increase the throughput in the whole system. It looks like we accomplished all of our goals."



Log going through metal detector.

Mark your calendars for Friday, April 29 and the 2004 TPA Annual Meeting. We're working on an exciting program that should be valuable and interesting to all of our members.



And, while you have your calendars out, mark down Sept. 16 and 17 for the North Star Expo.

## Executive Vice President's Column

The Expo committee is trying a different date than has been used lately.



The show will be in Grand Rapids at the fairgrounds and we're working on some exciting new things for this year.



The new voice that you will be hearing answering the telephone at the office is Jane Abel. Jane started in January and comes to us with experience in both the private and public sector. Most recently she worked for the DNR Division of Forestry at their Cloquet Area office. Please join me in welcoming Jane to our team.



We've written in the *Timber Bulletin* about the DNR Division of Forestry's plan to update and change over their computer system at the end of this year. This is an important and badly needed project. One consequence of this changeover is that Division of Forestry expects that auctions this fall will be a bit lighter than usual. This will be offset by a heavier pace in early 2006. Just a word to the wise as you plan for the future.



After a long string of victories, we got a split decision in the lawsuit challenging the Superior National Forest's Big Grass project. On the positive side, the judge upheld the Superior's work on the Canadian Lynx and on the use of habitat analysis for other species.

On the negative side, he ordered the forest to beef up some of their analysis on cumulative effects by doing an EIS. At the end of the day it means more paperwork will be generated before the project can go forward. It does make you wonder when our file on the document prepared by the forest is more than four inches thick.



Speaking of the U.S. Forest Service, it's their 100th Anniversary as an agency this year. They have a long and storied history in resource management that has been a credit to our country for much of their existence. During the 1990s they became a favorite whipping boy as they were buffeted about and seemed to lose their way.

Here's hoping they can find their way once again. The most important thing for the agency is to become an organization that manages the resources under their control once again. They simply need to get things done. Whether it's managing for timber, recreation, wildlife, water quality or any other resource, the agency needs to accomplish more.

While the U.S. Forest Service has been hamstrung and kicked around by courts, environmental groups, elected officials and those of us in the industry at times, they need to focus back in on accomplishments. The present administration and Congress have given them support, new tools and the clear direction to get going.

I believe that there are still

enough people in the agency to turn it around. I'm excited when I see a district ranger like Tracy Beck on the Chippewa moving projects through the process and implementing them on the ground. I'm encouraged when I meet with regional forester Randy Moore and he lays out specific measurable objectives that he says will be met. We had USDA Assistant Secretary Mark Rey as our keynote speaker at last year's annual meeting and heard his vision and plans which were very direct.

Can the U.S. Forest Service have a productive start to its second century? Yes. And it must.



Our old friend former Senator Bob Lessard is back in the saddle again. The DNR has hired Bob on a consulting basis to work on various issues and to be a liaison with groups. It's a good move on the DNR's part to draw on Bob's wisdom and experience. I'm sure that they'll have a lot of interesting meetings.



Again, mark your calendars for the TPA Annual meeting and the North Star Expo. And, more importantly, take the time to have a safety meeting with your employees no matter what part of the forest products business you are in.

Mark your calendars now for the  
**TPA Annual  
Membership Meeting**  
Friday, April 29, 2005  
Spirit Mountain, Duluth Minn.

## Timber Trespass Occurrences on the Rise

*(Because of the severity and occurrence of this issue, we are reprinting this for your benefit.)*

Cases of timber trespass are up this year. While a normal year might involve \$100,000 in timber

trespass on state-owned land, the DNR has seen that amount in the last five months alone, according to Doug Ford, MN/DNR-Forestry timber sales program supervisor. And it appears this trend is occurring across all ownerships.

Generally, timber trespass is any timber cut, removed or negligently damaged in violation of a permit or contract, as well as any timber cut

during suspension or after cancellation of a permit. While some trespasses are intentional, much of it can be avoided and Ford offers the following guidelines regardless of ownership:

- Property lines are accurately located in cooperation with adjacent landowners and double-checked if necessary
- On-the-ground cutting boundaries and reserve areas are clearly designated
- Detailed cutting regulations are spelled out in writing

In DNR trespass cases, about 60 percent involve cutting of private timber crossing onto state lands.

## Environmental Impact Statement to be Prepared for UPM/Blandin Paper Thunderhawk Mill Expansion Project

The Minnesota Department of Natural Resources (DNR) will prepare an environmental impact statement to evaluate the potential impact of expanding a paper mill in Itasca County.

UPM/Blandin Paper proposes to construct a new paper manufacturing line and increase pulping capacity at its Grand Rapids paper mill. The project is called Thunderhawk.

Development for Thunderhawk is proposed mostly for the existing mill site, but options for offsite warehouse facilities are also being considered. The project also includes the shutdown of an existing paper machine and other facility improvements. The mill now produces about 450,000 tons of publication-grade paper per year. Paper production is expected to increase to an estimated 760,000 tons annually with the project.

The DNR has prepared a scoping environmental assessment worksheet and a draft scoping decision document to assist in identifying issues and analyses to be evaluated in the environmental impact statement. The documents are also posted on DNR's Web site at [www.dnr.state.mn.us/input/index.html](http://www.dnr.state.mn.us/input/index.html).

# U.S. Senator Norm Coleman Tours Hedstrom Lumber and Helps Industry

by Maureen Talarico

If you've ever thought Washington's politicians are out of touch with reality, a recent visit to Grand Marais by one of Minnesota's senators may change your mind. Senator Norm Coleman, (R), toured the Hedstrom Lumber Company in December, and then spoke about some of the problems facing the industry today. "I think I have a good understanding of some of the challenges you have, I think I do," said Coleman. "I was looking at some of the numbers I got recently that tell an interesting story about where we've been, where we're at, and where we should be going."

First, Coleman toured the sawmill and met with employees. Then, he sat down with several leaders in Minnesota's forest products industries, including Howard Hedstrom, owner of Hedstrom Lumber; Tom Collins, mill manager of Sappi Fine Paper; Dan Toivenen of Sappi; logger Kent Anderson; and TPA staff Wayne Brandt and Maureen Talarico. Much of the discussion focused on getting more wood out of the national forests. "The Allowable Sale Quantity, or ASQ, is defined as a target for the Forest Service, but then, what is the



Howard Hedstrom and Senator Coleman inside the sawmill.

reality?" said Coleman. "Preservation of our national forests is not inconsistent with good management."

The senator spoke of pending litigation regarding the new plans, stating it was important that managers not get paralyzed by the legal system. He also listened as industry experts described the aggressive import market and lack of local supply. "We're a

wood state and can't get the wood," said Collins. "In fact, the source of logs in this area is getting to a point where there's a shortage of supply in relation to demand."

Coleman listened for nearly an hour, as mill managers and sawmill owners, including Hedstrom, spoke about getting more money to the Forest Service to help push up the ASQ. "This is the right thing to do," said Hedstrom. "Those of us in the industry need the wood." As Coleman wrapped up his visit, he pledged his support for the industry, "I can push. I can't press a button or flick a switch," he stated... "But I'm willing to help whatever ways I can."



Left to right: Howard Hedstrom, Senator Norm Coleman, and Jack Hedstrom.



Left to right: Howard Hedstrom, Senator Norm Coleman, and Tom Collins of Sappi Fine Paper discuss Minnesota's wood supply issues.



Senator Coleman takes time to meet Bonnie Gay Hedstrom and others at the sawmill.

# U of M Lab, Land will Improve Forest Productivity and Health



Left to right: Dan Erkkila, head of the U of M North Central Research and Outreach Center; Rick Klevorn, state silviculturalist with the Minnesota DNR-Division of Forestry; Representative Loren Solberg, Grand Rapids-DFL; Susan Stafford, dean of the U of M College of Natural Resources; Alan Ek, head of the U of M Department of Forest Resources; Andrew David, associate professor in the U of M Department of Forest Resources; John Kessler, UMD-Facilities Management. *Photo by Martin Moen*

**A** new forest genetics and silviculture laboratory, and land for testing seedlings, will greatly expand efforts to improve the productivity and health of Minnesota's forests. The lab is located at the U's Research and Outreach Center in Grand Rapids, Minn. University officials and state legislators opened the lab Dec. 15 at 2:30 p.m. The land and construction were funded with a \$300,000 appropriation from the 2002 Minnesota Legislature.

The 900-square foot lab will "allow scientists to perform a wide

range of genetic, silvicultural, and environmental analyses," says associate professor Andrew David, who will coordinate work in the lab. "It gives us new capabilities in an area of the state where forestry is a key part of the economy."

Minnesota's \$6.9 billion forest products industry employs over 56,000 people and is the state's fourth-largest manufacturing sector. In addition, Minnesota's forests fuel a sizable portion of the state's nearly \$10 billion tourism industry, and enhance the quality of our water. The state's forests face a variety of threats, from insect

invasions to white pine blister rust, to ever-increasing demands for the benefits forests provide.

In addition to the laboratory, the state also provided money to purchase land to expand the U's opportunities to test seedlings in areas of diverse soils and climate. Negotiations are underway to purchase the needed parcels of land. David says, "Testing the performance of seedlings in real world conditions is central to our tree improvement work."

The University participates in two university-industry-government tree breeding program cooperatives: the Minnesota Tree Improvement Cooperative, and the Aspen-Larch Genetics Cooperative. Collectively, these relationships involve 30 partners who seek to increase the quantity and quality of timber yields in the region. This is done through the deployment of faster growing seedlings while maintaining genetic diversity and adaptation to local climate conditions. The breeding programs of both cooperatives rely on traditional breeding and selection methods.

The forest genetics laboratory and breeding program are coordinated by the University's department of forest resources, which is part of the College of Natural Resources. More information about the college and its forest-related programs can be found at [www.cnr.umn.edu/FR](http://www.cnr.umn.edu/FR).



# Ted Kromy: From Pro Ball to Wood Broker

by Maureen Talarico

**M**ost little kids dream of grand and exciting careers . . . astronaut, professional athlete, firefighter, jet pilot (that was mine) . . . but few actually get to see that dream realized. Somewhere along the way, common sense, practicality and basic physics kick in and we go out in the real world and get real jobs. Ted Kromy is the exception. Growing up just north of the Twin Cities, with a sports-minded father, Ted took to the game of baseball. His name even comes from a baseball great. Ted is named after Ted Williams, a Boston Red Sox hall-of-famer and Ted Kromy's dad's idol, to the point where Ted Kromy's middle name is Williams, with the s.

"Our family was really into sports. My dad loved baseball and that's all I ever did. That's what I liked doing, then I ended up signing professionally," says Kromy. In fact, he signed straight out of high school with the Minnesota Twins. "It was fun. I enjoyed those times. Two years of AAA. I was a Toledo Mud Hen in '82, and then I was out in Portland, Ore., in 1984, in the Pacific Coast League. The closest I got to the big leagues was when I was on the 40-man big league roster in 1981 with the Twins." And he got to know



Ted Kromy's 1983 baseball card.

some pretty big names in baseball . . . including manager Tom Kelly and third baseman Gary Gaetti. "Frank Viola signed that year and came and joined our team, so that was quite a team. We won the southern league that year, in '81. We beat the Nashville Yankees in the series and they had Don Mattingly."

After seven years of professional ball, Ted Kromy was ready to start his second career. His grandfather, a retired railroad employee, owned 180 acres in Jacobsen on the Mississippi River, and when Ted was little, he and his family would

hunt and fish there. It seemed only natural for Ted and his family to move north. "When I was done playing ball, I thought I wanted to live up north, but what was I going to do? So we got into the logging business."

That was in the winter of 1984 and Ted, his brother and two cousins began selling firewood. "We got into that in a very small way. We thought it was in a big way at that time, in firewood." Ted bought his first piece of equipment . . . a 6-cord Chevy C60 gas model with an old Lemco loader. "And then we added a Timberjack skidder, an old one. When we bought it, it was old and used." They did the felling by hand and worked the land with the old equipment, slowly introducing themselves to the people in the Grand Rapids area logging industry. Before long, Ted had a clientele built up.

His company is Northern Forest and Wildlife Manager. "Then we started cutting more of the pulpwood. And I was just always interested in selling the wood myself. I was also interested in finding other people that would cut that I could buy the wood from them and sell it. I just liked those relationships." After about five years, he started to buy and sell. He was also loading and hauling the

*(continued on page 14)*



Ted Kromy with newly-cut tamarack.



View from sale in Jacobsen.

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The Kromy home next to the Mississippi.



View of the river from the Kromy's deck.

*(continued from page 12)*

wood, too. "I trucked myself, full time, up until about two years ago."

But then, more important priorities came along: his kids, Mikayla and Brett, and their extracurricular activities and the fact that he always seemed to be at opposite ends of the county when a landowner called to meet. So Ted got out of the trucking end of the business, with the exception of hauling his kids to basketball, piano, hockey, baseball and golf. "My back's never felt better." Ted's wife, Carol, works full time for Itasca County Sheriff's Department and is involved in his logging business as "bookkeeper."

Now a full-time wood broker, Kromy works steadily with several loggers, but has no one under contract. "I'll help loggers occasionally to finance equipment that's broken down or different things like that because they are selling me their wood. And I purchase a fair amount of stumpage and attend the auctions." His business has grown from a start-up firewood operation to 25-thousand cords a year. He averages 50 loads a week, but the range can vary with the seasons, from fifteen up to 100. He works county, state, and private lands and mainly smaller tracts of 6, 10, 20 or 40 acres. "I've landed a lot of private timber sales through just word of mouth, and reputation."

Despite his success, the high



The Kromy family: Ted, Carol, Mikayla and Brett.

stumpage prices and lack of fiber availability don't make the job of a wood broker any easier. "Just a few years ago, I had to really work to sell my 25-thousand cords. I had to work hard to sell it. Now, it's so easy to sell wood, anybody can do it. But nobody has it."

And it's the ups and downs of life in the logging industry that make Ted glad to be a member of the Timber Producers Association. "I think they're on top of most of the important issues going on in the timber industry. They've done a lot for the trucking and the trucking laws and regulations as far as binding loads. Even these weight increases that they've got are real helpful."

Ted's competitive nature led him to success in both professional baseball and wood brokering. His friendly personality and sincerity make him a good person to work with, and a good person to know. Ted says he may not have been born into the industry, but is glad this is the career path he's embarked upon. "It's just changing so fast. It's a constant battle to try to keep up with what I need to be doing to still be successful at what I do. I enjoy what I'm doing. I meet a lot of new people and there's nothing repetitious or boring about it. It's a constant challenge."

# The Truth About Spring Load Restrictions

by Maureen Talarico

Every year about the end of February, beginning of March, that slow, sinking feeling of anticipation of when the state will put on spring load restrictions takes place. No matter what the winter was like – lots of snow, lots of ice, lots of cold, all of the above – it seems they come on earlier and earlier every year. So Dave Van Deusen, pavement design engineer, MN/DOT Office of Materials, has provided us some information on how he and his colleagues determine winter weight increase dates and spring load restriction dates.

“These decisions are made using measurements of moisture, state and ground freezing and thawing, coupled with prevailing and forecasted air temperatures. This helps to determine when the road structure may become weakened and significant damage could occur due to heavy loads. The MN/DOT Office of Materials is responsible for gathering and analyzing the necessary information and communicating load increase and load restriction information. Decisions are made with input from the MN/DOT districts and State Aid,” says Van Deusen.

The criteria used to determine when winter load increases begin is when the Cumulative Freezing Index (CFI) for a zone exceeds 280°F-days based on the three-day weather forecast, with predicted increases in excess of 280°F-days. A three-day advance is used to ensure that continued freezing weather is likely. Likewise, the start of the load restriction period is determined for each zone using measured and forecast daily air temperatures for several cities within each frost zone. The criteria used to determine when the load restrictions will be placed is when the Cumulative Thawing Index (CTI) for a zone exceeds 25°F-days based on the three-day weather forecast, with predicted increases well in excess of 25°F-days. The three-day advance forecast

temperatures to ensure that the postings are on at the beginning of the thaw and at the same time provide a three-day notice to road users.

Figure 1 below shows conceptually the principles behind freezing and thawing indices. The CFI is the area (blue region) between the average daily air temperature curve and the horizontal line representing the freezing reference temperature. The freezing reference temperature (32°F) represents an average daily air temperature below which freezing of the pavement base, sub base, and sub grade soils may occur. Freezing will occur at a rate that is dependent on the magnitude of the difference between the average daily air temperature and the freezing reference temperature as well as the number of days the difference accumulates. A threshold of 280°F-days was selected based on comparison of frost depth measurements and CFI for a variety of frost monitoring sites around Minnesota.

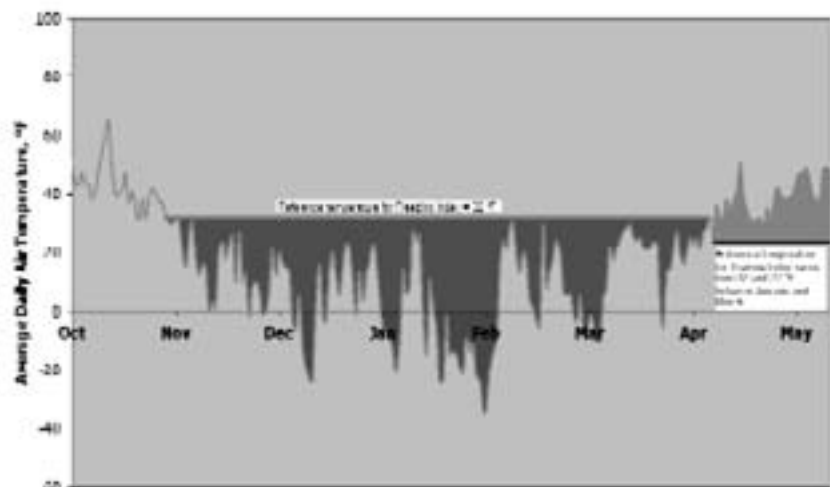
Similarly, the CTI is the area (red region) between the average daily air temperature and the line representing the thawing reference temperature. The concept of thawing reference temperature is similar to that used for the CFI. However, the thawing reference temperature used for the CTI is not constant and varies based on the

time of year. according to Table 1 in MN/DOT's Technical Memorandum No. 04-20-MAT-03. Thawing reference temperatures and threshold were selected based on a correlation of average daily air temperatures and pavement base temperatures. Example calculations and the equations used are shown in Tables 1 and 2. Note that the equation for Thawing Index includes a factor to account for minor freezing events that may occur. However, once thawing starts to take place, any freezing event is reduced by fifty percent in the thawing index calculation.

In Minnesota, SLR impacts many more miles of the county, township and municipal systems than the state trunk highway system. The percentage of trunk highways subject to SLR is approximately 13% of the 11,900 miles of the state network. On the other hand, out of 30,300 miles of the total County State Aid Highway (CSAH) system, only 3% are 10-ton or greater, and thus, 97% are subject to SLR. Counties, townships and municipalities are required to follow state recommendations on load restriction posting and removal dates.

However, many motor carriers say that while the system may be designed to save pavement life, it is often restrictive to commerce and the dates of SLR placement are

Figure 1 – Air temperature graph showing the concept of freezing and thawing indices.



**Table 1 – Example showing calculation of daily and cumulative freezing index. Summation begins when freezing weather takes hold and ends when thawing begins in the spring.**

Date	Average Air Temperature (°F)	Daily FI (°F)	Cumulative FI (°F-Days)
20 Oct	37		
21-Oct	35	-	
20 Oct	29	2	2
21-Oct	28	5	7
22-Oct	28		7
23-Oct	30	2	9
24-Oct	21	11	20
25-Oct	43	47	67
26-Oct	25	0	67
27-Oct	49	2	69
28-Oct	10	10	79
29-Oct	12	20	99
30-Oct	16	16	115
-			
CTI			

**Equation**  
*Freezing Index*

$$CTI = \sum_{i=1}^n (\text{Daily Freezing Index}) \quad (\text{Equation 1})$$

$$\text{Daily Freezing Index} = (T_{\text{reference}} - T_{\text{avg}})$$

Where: CTI = cumulative freezing index summed over a period of 1 to n days (°F-days)  
 $T_{\text{reference}}$  = Reference air temperature = 32 °F,  
 $T_{\text{avg}}$  = Average air temperature from preceding day, °F.

**Table 2 – Example showing calculation of daily and cumulative thawing index. Summation begins when freezing weather ends and thawing begins in the spring.**

Date	Average Air Temperature (°F)	Daily TI (°F)	Cumulative TI (°F-Days)
1-Nov	1.2	0.0	
2-Nov	4.9	0.0	
3-Nov	21	20.7	20.7
4-Nov	53	55.1	75.8
5-Nov	25	23.8	99.6
6-Nov	31	31.3	130.9
7-Nov	47	44.8	175.7
8-Nov	28	27.3	203.0
9-Nov	12	11.3	214.3
10-Nov	44	43.0	257.3
11-Nov	32	31.3	288.6
12-Nov	44	40.8	329.4
13-Nov	1.2	0.0	329.4
14-Nov	18	17.7	347.1
-			
CTI			

**Equation**  
*Thawing Index*

$$CTI = \sum_{i=1}^n (\text{Daily Thawing Index} - 0.5 + \text{Daily Freezing Index}) \quad (\text{Equation 2})$$

- When  $(T_{\text{avg}} - T_{\text{reference}}) > 32^\circ\text{F}$ ,  
 Daily Thawing Index =  $(T_{\text{avg}} - T_{\text{reference}})$  and  
 Daily Freezing Index = 0°F-day
- When  $(T_{\text{avg}} - T_{\text{reference}}) < 32^\circ\text{F}$ ,  
 Daily Thawing Index = 0°F-day and  
 Daily Freezing Index =  $(32 - T_{\text{avg}})$

Where: CTI = cumulative thawing index summed over a period of 1 to n days (°F-day)  
 $T_{\text{avg}}$  = Average air temperature from preceding day, °F, and  
 $T_{\text{reference}}$  = Reference air temperature (see Table 1 in Mn/DOT Technical Memorandum No. 01-20-MAT-02) (°F).

mistimed. Van Deusen outlines several improvements either planned, in progress, or complete:

**Seasonal Load Limit System Improvements**

- Creation of a new North frost zone to provide haulers the potential advantages of maximizing the use of Minnesota’s transportation system where possible.
- Consideration is being given to installing additional frost monitoring sites. Currently there are 11 frost-monitoring sites across the state. Van Deusen says, “The data from these sites are used in the decision-making process to confirm predicted load limit and increase dates. Additional sites may allow additional system flexibility but their installation and usefulness need be weighed against other priorities and funding.”
- Incorporation of MN/DOT Road and Weather Information System (RWIS) data into the decision-making process. Selected RWIS data are currently used in determination of winter load increase and spring load restriction placement dates. Planned efforts include gaining wider access to the data, improved processing techniques, and incorporating this information into the Seasonal Load Limit website.

**Road Network Improvements**

- At the state level, each MN/DOT District strives to meet many different objectives, according to Van Deusen. One objective is the structural capacity of its road network. The number of miles of load-restricted MN/DOT roads has been steadily decreasing for the past 20 years. During last year’s construction season, two northern districts upgraded substantial portions of their network to 10 tons.

Van Deusen says, “The same is true at the county level, although the funding constraints are more severe. A committee has been formed to develop a plan for a 10-ton network.”

It is estimated that a typical low volume asphalt road’s life will be increased by about 10% due to implementation of the improved

SLR procedures. The potential savings resulting from improved load restriction placement are expected to be substantial since in Minnesota there are about 39,000 miles of paved roads that do not meet the 10-ton spring load design standard. The vast majority of these roads are paved with asphalt concrete, which has an annual construction and overlay cost of about \$12,000 per mile per year, resulting in an approximate annual savings of more than \$10,000,000.

Van Deusen says, "In regions of the United States where pavements are constructed in freeze-thaw

environments, SLRs are typically used as a preservation strategy. During the spring, pavement layers are generally in a saturated, weakened state due to partial thaw conditions and trapped water. The crucial time for SLR is when the pavement first thaws; thus, proper measurement and prediction of thawing events is crucial to a successful load restriction strategy. Cooperative research between the Minnesota Department of Transportation, other state DOTs and several Canadian provinces continues to be important to further quantify the benefits and costs of

SLR to the infrastructure and the economic transport of materials."

For more information about SLR and Winter Load Increases, MnDOT maintains an excellent website. Check it out at: [www.mrr.dot.state.mn.us](http://www.mrr.dot.state.mn.us), and click on Seasonal Load Limits or you can reach MnDOT staff directly at: MN/DOT Office

of Materials: 651-779-5592  
 MN/DOT Technical Memorandum  
 No. 04-20-MAT-03  
 Pavement Design  
 Engineer: 651-779-5564  
 Pavement Engineer: 651-779-5535

## BEWARE OF METH LABS

Discoveries of illicit drug labs have increased in some parts of the country. For example, virtually no labs were discovered or seized in the Midwest and central Appalachian states in the mid-1990s, but in 2003 several thousand were seized. Like marijuana patches, these drug labs endanger anyone who discovers them. Seeking the cover of deep woods, drug producers can quickly set up these labs to create methamphetamine, a powerful, addictive stimulant that can cause violent or paranoid behavior. Labs usually produce five pounds or more of this chemical per batch, worth thousands of dollars.

Known as "meth," "crank," or "speed," the drug is produced and refined in a series of fairly simple and fast manufacturing steps, using chemicals that are readily available and inexpensive. The chemicals used in making methamphetamine, and the process's byproducts, are highly toxic. This fact means increased danger for forest industry workers who may accidentally discover them.

Meth labs may be set up in many kinds of sheltering structures – old cabins, barns, outbuildings, chicken houses, trailers, buses. Drug cooking equipment typically consists of glass bottles, tubes, and a gas burner fueled by a propane tank. The people working in these drug labs should be considered extremely dangerous, since they are

fearful of being caught and may be prone to violence. But another danger is the waste material left behind once a lab has been dismantled. Meth manufacturers simply discard toxic chemical containers and dump plastic bags of waste in the woods, abandoning hazardous substances such as sulfuric acid, lead acetate, and lithium aluminum hydride – a chemical so dangerous that even the moisture on a person's hands can cause it to explode.

Be aware of the following indicators of possible drug labs in operation:

- "Posted" or "No Trespassing" signs on land that should not be posted.
- Travel trailers, tents, or small mobile homes in out-of-the-way locations.
- An unusual amount of vehicle traffic, especially at night, in an isolated area.
- Signs that people are frequently



Meth dump site.



Anhydrous ammonia cached in the woods.

- visiting an unusual area.
- Distinctive, obnoxious odor.
- Trash in the surrounding area – plastic garbage bags, plastic or glass bottles (clear or brown), 20- or 30-gallon drums, boxes, and cardboard cylinders with metal ends and a large plug for access.

### Chemicals Associated with Meth Labs

Pseudoephedrine (cold tablets)  
 Ephedrine (cold tablets)  
 Red Phosphorus (Matches/ road flares)  
 Lithium (Batteries)  
 Alcohol (Isopropyl or rubbing)  
 Toluene (Brake cleaner)  
 Ether (Engine starter)  
 Sulfuric Acid (Drain cleaner)  
 Salt (Table/ rock)  
 Iodine (liquid or flakes/ crystal)  
 Trichloroethane (Gun scrubber)  
 MSM (Cutting agent)  
 Sodium Metal

(continued on page 20)

(continued from page 18)

Methanol/ Alcohol (Gasoline Additives)  
Muriatic Acid  
Anhydrous Ammonia (Farm fertilizer)  
Sodium Hydroxide (lye)  
Acetone  
Kitty Litter

#### **Equipment Associated with Meth Labs**

Pyrex dishes  
Measuring cups  
Laboratory beakers/ glassware/ mason jars  
Jugs/ bottles  
Coffee filters, strainers, paper towels, cheesecloth, towels/ bedsheets (for filtering)  
Thermometer  
Funnels  
Blenders  
Rubber tubing/ gloves  
Pails/ buckets  
Gas cans  
Tape/ clamps  
Internet documents/ notes  
"How to Make Methamphetamine" books  
Aluminum foil  
Propane cylinder (20 lb.)  
Hotplates  
Plastic storage containers/ ice chests

In terms of products used and trash that is left behind, pseudoephedrine is the main precursor utilized in meth labs. Its source is cold medication. Thus, numerous boxes of cold medications and the blister packs are left behind. Also, depending on the method that the cook is using, you may run into numerous matchbooks, in that the cook is extracting the red phosphorus off the striker plates. Other items may be numerous cans of starting fluid (ether), Drano/ Red Devil lye (sulfuric acid), iodine tincture bottles, hydrogen peroxide bottles, and numerous acids.

Another common meth cooking method uses a combination of anhydrous ammonia and lithium batteries. Anhydrous ammonia is commonly used as a farm fertilizer, and the cooks will place the ammonia in 20-pound propane tanks that are used for gas grills. Anhydrous ammonia reacts with the brass fitting on the propane tanks and will turn that fitting blue. (Watch for this indicator.) The lithium is typically obtained from

camera batteries. The cook will break the batteries open and remove the small strip of lithium inside. The last step in the cooking process usually involves the use of homemade acid gas generators. These are often made by using one-gallon gas cans or 2-liter soda bottles with plastic tubing/ hosing taped to the opening. These homemade gas generators are very dangerous and can let off gas for long periods of time.

Drug Enforcement agents advise extreme caution when approaching old cabins in the woods or trailers parked along forest roads, since these structures may house meth labs. Don't risk a confrontation with a drug manufacturer. Remember that drug labs can explode at any time if an error is made in the mixing or the cooking. Leave immediately if any suspicious operation or waste material is discovered in the woods. Do not investigate or touch the waste containers; report your discovery to your supervisor or woodlands manager and, if it is your responsibility, to your state's narcotics agency or the U.S. Drug Enforcement Administration (DEA).

Although drug labs primarily threaten the safety of persons who discover them, they pose yet another problem for the forest products industry: disposal of waste. Landowners may be legally responsible for disposing of hazardous material found on their land, and disposing of it acceptably can be both expensive and time-consuming. Fortunately, the DEA currently is taking responsibility for meth lab cleanup and associated costs in most cases.

*This safety alert was reprinted with permission from the Forest Resource Association.*

## 6th Axle Winter Truck Loads Not Permitted on Highway 2 Bridge Over the Prairie River

Effective on January 28, 2005 trucks weighing 98,000 lbs., with the special permit sixth axle hauling raw timber or unfinished wood products will NOT BE ALLOWED to cross the U.S. Highway 2 bridge spanning the Prairie River near the city of Grand Rapids.



According to District 1 of the Minnesota Department of Transportation, because of its seriously deteriorated and weakened condition, this 73-year-old steel high truss bridge is limited to a maximum gross vehicle weight of 90,000 pounds (45 tons). This special weight restriction will be strictly enforced by the Minnesota State Patrol.

MN/DOT said that special advance warning signs were posted Friday, Jan. 28, to alert truckers of this emergency weight limit. The advance warning signs will be located east of the junction of Highway 2 with Highway 65 west of the bridge and east of the junction of Highways 2 and 169 east of the bridge. These highly visible signs will allow truckers to exit U.S. Highway 2 onto these alternate routes that will safely accommodate the 98,000 pound special load limits for the timber industry that are now permitted under Minnesota Statute 169.8261.

MN/DOT will be replacing this aged structure this summer (2005) as part of a \$4.5 million highway improvement contract.

# A Delicate Balance

by Sarah Finley

**S**ustainable forestry has been a popular topic among natural resource managers, landowners, loggers, and politicians for a while. It's even become a bit trendy. Pick up a *Vanity Fair* or *Time* and you could well see a full-page ad encouraging readers to buy wood that comes from sustainably managed forests. The bearer of the message: None other than pop singer/actress/celebrity diva Jennifer Lopez.

While this approach to selling sustainable forestry is entertaining, it doesn't mention a significant detail: Voluntarily protecting and sustaining forests – locally, nationally, and worldwide – can bear a hefty price tag.

Five years ago, the Minnesota Forest Resources Council created a set of voluntary guidelines designed to balance forest use and protection, management, and sustainability in the state. According to researchers Mike Kilgore ('82, '84, '90) and Charlie Blinn in the college's department of forest resources, forest landowners can expect to pay additional costs when they require loggers to use the guidelines during timber harvest operations.

Kilgore and Blinn came to that conclusion after observing the bidding behavior of loggers who submitted sealed bids on 27 timber tracts in northern Minnesota. Sealed bid auctions are a common timber sale method where landowners typically get the highest stumpage bid (the price loggers offer landowners for timber). During the sealed bid auction that the study used, each logger presented two bids for each tract: one with the use of the guidelines and one without. The researchers found that for these study sites, the guidelines cost landowners in two ways. First, loggers reduced their stumpage bids by an average of 10 percent when the guidelines were required. Second, the amount of potentially salable timber decreased by an average of 2.4 cords per acre. This wasn't unexpected since the



**Left to right: Charlie Blinn and Mike Kilgore study the economics of forest resource management.**  
*Photo by Tom Foley*

guidelines advise leaving behind some salable timber for ecological, environmental, and aesthetic reasons.

The drop in stumpage price and salable timber together amounted to a \$136 per acre cost to landowners in the study. Based on this number, it would cost landowners \$3,264 to use the guidelines on a 24-acre timber tract – the average size of a timber

harvest in Minnesota.

One important point: 25 percent of loggers submitted paired bids that were equal. Apparently, they didn't perceive that the guidelines would cost them enough to change their bid. Or they didn't pass any guideline related costs to landowners in the form of lower stumpage prices.

## The Cost of Doing Business

So what exactly do loggers consider when developing their bids? How much of an influence do the guidelines have on stumpage bids? And is there one particular guideline that is thought to be more costly than others? These questions prompted Kilgore and Blinn to pursue a follow-up study that evaluated the bidding strategies of the loggers who participated in the study.

Using a mail-back survey, loggers were asked questions pertaining to their timber harvesting business and how they formulated their bids during the study's timber auction. The result: Kilgore and Blinn found a number of factors shape loggers' bidding behavior. For example, none of the specific guidelines that loggers were required to use (i.e., leaving a certain percentage of

## Minnesota Timber Producers Association *Meet the Directors*

**M**ike Rieger of Northome, Minn., started logging for his father in high school. He attended two years of Vo-Tech school then came home and started logging full time. In 1985, he became an owner of Rieger Logging. He started Rieger Trucking in 1988. Married to Jerelyn for 16 years, they have three children: Christopher, Emma and Benjamin. Mike enjoys hunting and family vacations. He currently serves on the TPA executive committee. Mike says he joined TPA because he felt it was important for



loggers to have a voice in important matters concerning the logging industry and community.



residual or dead trees) had more influence on developing bids than tract factors such as salable timber volume, which had the strongest influence. They also found that most loggers don't keep detailed records that would help them track income and expenses from previous timber-harvesting jobs, which means it would be difficult to accurately estimate the extra cost for using the guidelines in previous timber sales. In addition, approximately half of the loggers felt that they absorbed the cost of the guidelines whether the difference in the paired bids was large or small.

In short, some loggers feel that they incur the cost of using the guidelines. Take for example Warren Johnson, owner of Warren Johnson Logging Inc. in Ely, Minn. "On the logger's end, we don't have a choice but to use the guidelines," he says. "And they're a good thing. They're trying to enhance the forest, and we have a responsibility as loggers to do a good job. But we haven't been paid for using the guidelines, and it's just one more cost the logger has to absorb. It's the cost of doing business, and I think it rests 90 percent on the logger."

While the study suggests that half of all loggers share a similar opinion, this doesn't seem to prevent them from using or learning how to use the guidelines. Statewide guideline monitoring

efforts estimate that 85 percent of Minnesota's annual timber harvest is done by loggers who have undergone guideline training.

### **For the Greater Good**

Loggers aren't the only ones who believe they don't have a choice when it comes to using the guidelines. Forest landowners are feeling the pressure too. Dave Parent ('66), a private forest landowner in Andover, Minn., has implemented the guidelines for several years to help manage his 700 acres of forestland. "They provide me with a framework to manage my land in a sustainable manner," he says.

"And in the market, the paper mills require that the guidelines be followed. So I have to apply them." And the environmental benefits of using the guidelines may be just as strong of an incentive. "When I look at cost, I also look at the benefit," Parent adds. "The cost to the landowner is being offset by better management in terms of wildlife and riparian areas, and these sorts of things."

Other "sorts of things" can include improved water quality, less soil erosion, and more productive soils. It might also mean better preservation of aesthetically pleasing forest landscapes or irreplaceable cultural resources.

One of the biggest players in Minnesota's forest industry, UPM-Blandin of Grand Rapids,

Minn., has also managed its forestland according to the guidelines. "We started using the guidelines right away," says Jim Marshall ('74) who heads up Blandin's forestry division. "We felt that it would be a help to train foresters and loggers to be more consistent and step up to the next level of environmental performance."

And the guidelines don't come free to UPM-Blandin either. Says Marshall: "There's the cost of training our foresters and loggers, which requires time and resources."

### **Does it Pay to Play?**

If better forest management is not a powerful enough reason to use the voluntary timber harvesting and forest management guidelines, there are other incentives available to public and private forest landowners. "Guideline benefits produced on public lands justify their cost because these lands are managed for the products of both market and nonmarket goods and services," says Dave Zumeta ('95), executive director of the Minnesota Forest Resource Council. "And a variety of public cost-share, technical assistance, and tax incentive programs are available to private landowners. These programs at least partly offset the cost of guideline implementation, if not entirely."

While forest landowners may find ways to recover guideline costs, they are really only part of the cost equation. Loggers have made it clear that they, too, bear a cost. With this in mind, Kilgore and Blinn are preparing for the next phase of their study. "For a logger, extra time costs money because it lowers overall efficiency. So next, we're going to look at the additional time it takes loggers to implement the guidelines when harvesting a timber sale," says Blinn. "We're going to look at the operator's productivity over an extended period of time to see how it changes when the guidelines are used. This will help us identify some of the important guidelines that are taking a lot of extra time for the logger to apply."

*Published with permission from Spectrum, the University of Minnesota College of Natural Resources alumni magazine.*

## LOGGERS OF THE PAST . . .

# "Skidding by Horse and Ox"

by J. C. Ryan

This story is reprinted from an earlier *Timber Bulletin*—one of the first of "Buzz" Ryan's ever-popular contributions to these pages. The *Bulletin* will continue to reprint selected stories from the memories he recorded for us.—*Editor*



After watching various rubber-tired skidders demonstrated at the annual TPA logging demonstration and having seen the many types of power skidders entering the north woods in recent years, one may wonder how the vast stands of virgin pine in northern Minnesota were ever logged, considering that loggers had to skid mostly with horses and oxen.

In the early days, when logs were skidded to the rivers and lakes, quite a few oxen were used. They were slow and powerful, mowed well in the brush, and less than horses, were less expensive and needed less care. The oxen were generally paired, but it was not uncommon to see four or six oxen skidding a large log.

In Minnesota, oxen were used mostly in the southern part of the pine range along the St. Croix River, the Rum River and up along the Mississippi River to Grand Rapids or to a short distance west. Very few were used in the northern part of the pine range.

Throughout the northern half of the pine range, horses were used for most of the log skidding. Two horses were used most often but when there was a small run of timber, sometimes a single horse was used.

When a large butt log was too much for a single team, it was left until all the skidding nearby was done. Then four horses would go in and skid all the big butt logs that had been left on a certain tract. This was usually done in the spring as a clean-up.

I remember one spring at one of the Northern Lumber Co. camps run by Tom Henderson, an unusual number of pine butt logs were skidded. Early in April, they were left two and three on a skidway all along the railroad track in Section 30-32-12. Dan McCleod was skidding them as we happened along. We were estimating the number of board feet in each log. These ran from 900 to 1200 board feet per log. They were all loaded at one time and made eight cuts of the finest pine logs I ever saw.

Skidding logs were used on most logs and they were skidded one at a time. However, when the logs ran small, a skidding chain was used and then two, three or even four logs were skidded at a time. Skidding usually was confined to about 40 rods from the skidway or about half way across a forty—logging road usually went through the center of a forty if the terrain was level.

When skidding had to be done for any distance, a simple bunk drag with spikes along the tops of the bunk was used. The butt end of the log was then rolled into the drag and the top end left dragging on the ground. Two or three logs could be hauled in this manner. With the front end of the log on the drag, pulling was much easier for the horses.

Fire, pulp, posts and other short products were skidded with a two-bunk drag—usually pulled with a team of horses—and about a cord was taken out each trip. Here skidding was confined to less than one fourth of a mile.

Some large logs were peeled or harked on one side and then rolled and skidded with the smooth side down to make the pulling easier for the horses.

Cedar posts, mauling poles and long timbers were skidded similarly to logs, with the single-bunk drag used for longer distance skidding.

A team of horses and one man would skid up to 150 logs per day. There was usually one "swamper" cutting trails for each skidding team. Often, as many horses skidded

as hauled logs in a camp. However, plans were to have most of the skidding done early in January before the snow got deep. Most single-haul logs were decked in the woods so a whole load could be loaded in one spot and the weight not moved with half a load or several times while being loaded.

Only one company used the steam skidder with any success in Minnesota. That was the Crookston Lumber Co. of Bemidji, which did steam skidding in the Kellbala, Mispah, Northome and Blackduck areas from 1910 to 1920. Several other companies tried this type of cable skidding, but had little success. The Cloquet Lumber Co. tried it in the Cloquet Valley Forest area.

The cost of log skidding was one of the factors a lumber camp foreman watched very closely. And he always tried to get a good straw boss to handle the crews.



# Classifieds

To serve our readers better, the Timber Bulletin offers free classified ads of up to 85 words to all members and associate members of the Minnesota Timber Producers Association. All ads must be submitted in writing to the Association office.

## USED EQUIPMENT FOR SALE

### FOR SALE

#### CABLE SKIDDERS

1969 C4 TF .....P.O.R.  
1970 440A JD .....10,500  
640 JD rebuilt engine  
and transmission .....14,500

#### GRAPPLE SKIDDERS

1991 450B TJ, Cummins eng...18,000  
1982 JD540B w/studded  
chains .....21,000  
1980 640 JD, dual arch .....16,000  
2000 648G III, dual func.,  
enclosed cab with A/C,  
new engine and tires.....110,000  
1998 648G II JD, single function,  
enc. cab with A/C.....55,000  
1980 C6 TF, with 23.1x26 tires ..9,000

#### CRAWLERS

1997 D5MLGP .....P.O.R.  
1995 D3CLGP, new undercarriage,  
very clean .....33,000  
1975 450C, 6-way blade.....12,500  
1990 650G, 6-way blade.....32,000  
1977 D6D LGP .....27,000  
1987 D4H LGP, 6-way blade,  
encl. cab .....27,000

#### KNUCKLE BOOM LOADERS

1996 170A Serco on S.P.  
Carrier w/60" slasher .....53,000  
1998 210E Prentice  
w/60" slasher.....45,000  
1987 210C 6 cyl JD  
slasher pkg .....27,000  
1995 1000B Morbark self-prop.  
carrier, pull thru delimeter,  
60" circular slasher .....55,000

Prentice 90 on tandem truck,  
19' bed.....8,500  
1969 Brown semi trailer  
w/centermount loader.....6,500  
1987 XL 175 Husky, on truck..17,500

#### TRUCKS

1978 GMC 2-ton w/hydr hoist,  
flatbed dump ..... 4,500

#### DELIMBERS

1981 743 JD .....14,500  
1995 320 Cat w/3500  
DM Denbarco .....75,000  
Siirio delimeter/slasher.....7,000

#### EXCAVATORS

1990 Linkbelt LS2700 C  
Series II.....P.O.R.  
1997 JD 200LC.....70,000  
1990 JD 490D.....27,000  
1984 JD 690B .....13,000  
1992 Mitsubishi MXR55 .....12,000

#### FELLER-BUNCHERS

#### AND SHEARS

1993 775B Barko .....39,000  
1979 Drott 40, shearhead.....17,000  
1978 Drott 40, JD eng.....13,000  
1993 JD 590D w/18'

Roto saw .....27,000  
1995 JD 643D w/22"

Koehring sawhead .....P.O.R.  
1995 643D JD, w/Koehring  
hotsaw .....P.O.R.

1997 T415 Timbco, 8600 hrs.,  
w/2001 AFM #60 3 dr. roller  
processor head, 3000 hrs.  
on head .....95,000

1993 Risley Black Magic  
w/Risley sawhead .....65,000  
1976 544B JD .....17,000  
1976 544 JD 20" shear.....21,000  
1988 910 Cat, 17" shearhead,  
rebuilt trans.....32,000

1984 411B Hydro-Ax.....15,000  
1987 411B Hydro-Ax.....20,000

1986 511B Hydro-Ax, 6 BT  
Cummins .....27,000

1984 170 Franklin w/28"  
Timbeo bar saw .....25,000

#### WHEEL LOADERS

1992 ASV Posi-track.....P.O.R.

1992 410D JD backhoe .....27,000  
544B JD.....15,500  
1979 544B JD .....18,500  
1981 644C JD .....25,000

#### MISCELLANEOUS

Morbark 22" chipper .....P.O.R.  
1988 534B. Gradall, 8,000 lb.  
lift.....24,000

1979 Bobcat 731 Skidsteer  
loader .....6,700  
CAT V80D 8,000# forklift .....6,500  
54" slasher w/power unit.....6,500  
60" slasher w/power unit.....14,500  
20" Koehring sawhead

to fit 643 JD .....9,000  
New 60" Hanfab slasher.....P.O.R.

1994 (2) Featherlite flatbed  
semi trailer; aluminum....ea. 9,500  
New 72" Hanfab slasher.....P.O.R.  
Gafner Iron Mule Prehailer ...12,000

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