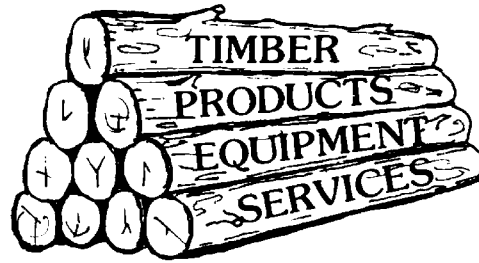




A Service to
Minnesota's
Forest Industry

The Market Place



Winter 2004

In This Issue: Our feature article is an outlook for wood products in Minnesota. We also have articles on Minnesota's spruce and balsam fir resources, The Great Lakes Wood Manufacturing Partnership and the Blandin Foundation's Vital Forests, Vital Communities Initiative. We finish with our ever-popular free ad listings. Hope you enjoy it!

Outlook for Minnesota Wood Products

The following article is based on input from the "Hardwood Review Weekly" and on interviews with Bart Rajala of Rajala Companies, Chris Breuing of Viking Forest Products, Dick Bahl of Root River Hardwoods, Brian Lee of Crystal Valley Hardwoods, John Fisher of Tri-State Lumber and Pete Aube of Potlatch. Many thanks to these fine folks for sharing their insights with us. Thanks also to Lance Sorensen of our staff for his assistance in conducting interviews. Hardwood Review Weekly comments are in plain font, local input & comments are in italics.

Lumber

Demand

2004 will shape up as a good year for the US economy and for the hardwood industry. Residential housing markets will remain strong and commercial construction should improve. Interest rates will remain low throughout the year, although we expect at least a modest increase by the 3rd quarter. US Gross Domestic Product (GDP) will grow impressively in 2004, increasing by as much as 5% for the year. Unemployment will trend downward but will remain above 5%. The recent weakness of the US dollar has made US exports cheaper in world markets. Buoyed by an improving economy, the US dollar will recover some of its value against the Canadian dollar & euro, but not much. The Conference

Board's Consumer Price Index fell slightly in December, but remains almost 50% higher than its March 2003 low.

After 3 sub-par years, the hardwood industry finally seems to be pulling out of the doldrums. Demand will increase in the first quarter of 2004, but supply will not. The industry has lost so much producing capacity that even light demand increases will strain supply, especially of common & lower grades.

With supply tight and demand rising from both North American and overseas markets, hardwood lumber prices will be firm to slightly higher during the first quarter. Log prices may also increase because the value of the dollar is still relatively low, making US logs attractive worldwide.

Individual Markets for Hardwood Lumber

Flooring: During the second half of 2003, strip flooring sales were only limited by manufacturer's access to raw material, and this won't change any time soon. Every time we thought green 4/4 #2 & 3A Common red & white oak prices had peaked, they rose again. However, with flooring companies resisting further price increases, and the spread between #1 and #2 Common prices historically low, it is reasonable to assume that #2 & 3A Common prices can't go much higher.

Furniture: Furniture sales trended upward in the 4th quarter of 2003 and a number of furniture plants found themselves short of lumber. Imported furniture will continue to erode North American market share. We expect demand

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from this sector for ash, soft maple and poplar to improve during the next few months.

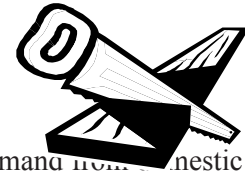
Kitchen Cabinets: According to the Kitchen Cabinet Manufacturers Association, year-to-date cabinet sales in 2003 are 12.4% ahead of the same period in 2002. The cabinet industry will play a key role in keeping 4/4 #1 Common red oak and cherry on the “hot” list.

Moulding/Millwork: As commercial markets kick into gear, the millwork industry should see more activity. Due to the rustic trend and the need to economize on raw materials, manufacturers may use more common lumber and less of the relatively expensive woods like cherry, hard maple and genuine mahogany.

Wood Components: This sector has been hit hard by the declining domestic furniture industry, but many have found other niches and opportunities.

Cants and Pallet Lumber: Demand for railroad ties will be strong, and sales of cants and pallet lumber are likely to increase as the economy grows. *Pallet prices may tick upward this spring. Demand for low grade hardwood is excellent right now. Supply is seen by some local contacts as a huge issue. They ask: “Where will the wood come from to meet demand in this sector?” The pest treatment requirements for pallets used in the export market will become a bigger issue in this sector as companies adjust to the new requirements.*

Lumber Market Comments by Species



Ash Lumber: 2004 may be a breakout year for ash. We expect increased ash demand from domestic and overseas furniture plants as an oak substitute. Ash will be in tight supply and prices may increase. *Local contacts reported demand for black ash as very good in low grades, and fair in the common & upper grades. Contacts reported green ash to be a “mixed bag” of demand, with low grade markets stronger than upper grades.*

Aspen Lumber: *Demand for lower grade aspen, mostly for pallet & crating markets, is very strong. In fact, sources described difficulty in obtaining adequate supply to meet demand. Demand for mid and higher grades is seen as stable.*

Basswood Lumber: Much of the basswood market (*especially wooden slats for window blinds*) has moved to Asia, where many substitutes are available. Sales of #1 and #2 Common grades should be fair, but FAS/1F may become a tough sell. *Local contacts suggested that while basswood continues to suffer depressed pricing compared to 4 to 5 years ago, reduced production has helped move the demand-supply balance closer to equilibrium, stabilizing prices. We can grow high quality basswood in Minnesota, so the depressed prices for higher grades are a concern. One excellent, but small, value-added market for high quality Minnesota basswood is carving stock and craftwood.*

Cherry Lumber: The cherry bubble will not burst during the next 3 months, as markets for the commons will remain busy and production probably won't increase. *We grow only a very small amount of quality cherry in Minnesota, in the southeastern part of the state.*

Paper Birch Lumber: *Markets for birch lumber and specialty products have been solid for several of our northern Minnesota mills for some time now. We have the advantage in much of northeastern Minnesota of growing birch that is mostly free of “fleck”, which is a common defect elsewhere that keeps birch from meeting veneer grade.*

Hard Maple Lumber: First quarter hard maple production will lag behind typical levels due to poor logging conditions in much of “maple country”. We forecast stronger demand for Sel/Btr hard maple. Shipments of 4/4 #1 common hard maple to kitchen cabinet plants may increase, while shipments of 4/4 #2&3A Common grades to flooring plants will be steady. *Much of our Minnesota hard maple is lower quality than that grown in Wisconsin & Michigan due to color and defect issues.*

Soft Maple Lumber: Very strong demand for 4/4 and 5/4 uppers will continue. Usage in the furniture industry will increase due to its price advantage over cherry and hard maple.

Red Oak Lumber: Strong domestic and export demand for red oak will continue for the next few months. Red oak prices are at record levels and are unlikely to change significantly in the next two months or until production increases. *We grow some fine red oak in Minnesota, especially in the southeastern and central portions of the state. Quality is a huge driver of price, so manage those red oak on highly productive sites and you will be rewarded.*

White Oak Lumber: Many markets are using 4/4 # 1 Common white oak, so business should remain outstanding. Even if flooring plants reduce purchases, other markets will pick up any excess supply. Demand for FAS/1F white oak will also be good.

Walnut Lumber: 4/4 and 5/4 walnut sales will be strong. However, the demand for thicker stock has declined and will not improve in the short term. Except for Japan, walnut sales to the far east are much lower than a year ago & aren't expected to improve.

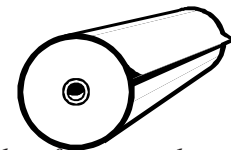
Softwood Lumber: *Softwood lumber prices are expected to remain relatively stable over the near term. Continuing oversupply relative to demand in this sector is seen as the biggest factor holding prices in check. The weakening U.S. dollar should help domestic producers compete with imports. Any agreement in the softwood lumber dispute between the U.S. and Canada will have a huge impact on the future in the softwood lumber sector. Local contacts report that competition can be stiff for the available supply of softwood stumpage.*

Oriented Strand Board (OSB)



Panel markets had a wild year, with a drastic price upswing beginning in May and then a major correction over several weeks in November and December. The weakening U.S. dollar should help domestic producers compete with imports (The beginnings of panel imports from South America were reported when prices were at their height). Demand continues to be strong due mainly to a continuing strong housing market, and there is little new capacity expected to come online in OSB in the next year. This, along with expected continued solid demand should help keep prices at profitable levels for mills. Prices should be more stable than last year.

Paper



North American paper manufacturers have been struggling with profitability for several years. Paper markets can vary widely by type of paper, but in general, a global oversupply relative to demand is expected to continue, keeping prices fairly stable. One factor that should help domestic producers is the weakening of the U.S. dollar, which makes imports of pulp and paper less attractive, and makes U.S. produced goods more competitive on the world market.

Final Comment: *I hope you have gained some information from the preceding article that will be helpful in planning your companies' future. Or at least I hope it serves as food for thought.*

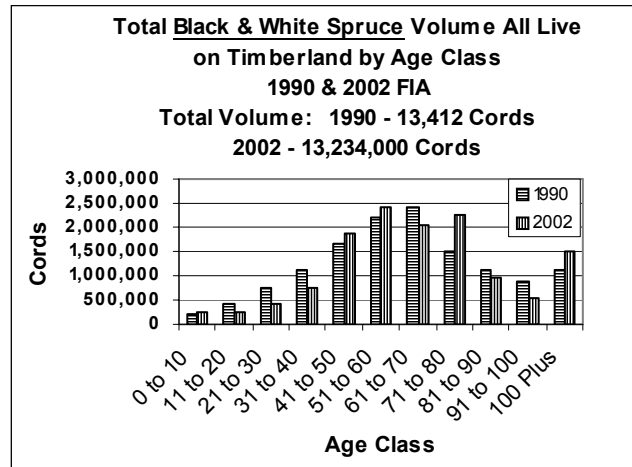
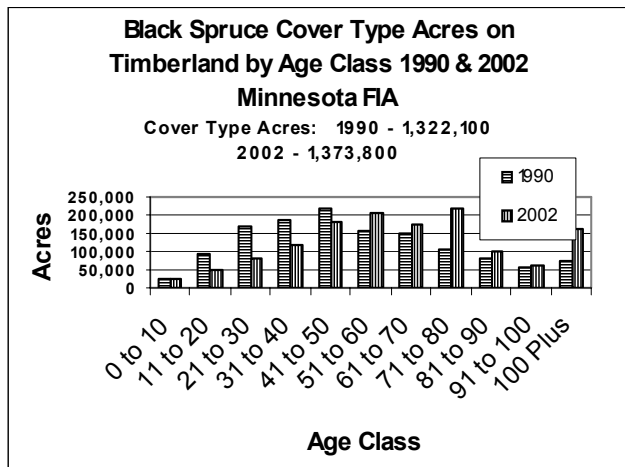
Minnesota's Forest Resources Overview

The spruce and balsam fir resources are part 3 of our continuing look at Minnesota's changing forest resource. Readers should be mindful that we are using the FIA data currently on hand. One more year of data will be available next summer, so some of the numbers will move a bit as more data comes online. Thanks to Jon Nelson, Doug Tillma, Dave Thomas and Mike Albers of our DNR staff for their helpful input.

Black Spruce

Black spruce cover type acreage is heavily weighted to ages 40 through 80, with a fair amount of acreage also above age 100. Recommended harvest or "rotation" ages can vary with site productivity and site condition from 75 to 120 years of age, with 100 years an "average" figure. Stands managed as "extended rotation" are carried beyond these ages. Black spruce exists largely on lowlands, often in nearly pure stands, or mixed with tamarack and/or white cedar and a variety of minor associated species.

The State of Minnesota is by far the largest owner of black spruce cover type acres, but counties, private owners and our two national forests all have significant acreage.



The 2002 FIA inventory indicates a stable cover type acreage of about 1,374,000 acres, up very slightly from 1,322,000 acres in the 1990 inventory.

The vast majority of black and white spruce in Minnesota (over 92%) is used in the making of high quality paper, where it is prized for its excellent fiber qualities. Some is also used by the sawmill industry, mostly in making studs but also in small quantities for other types of lumber. A very small amount of spruce is also used in making Oriented Strand Board (OSB).

Some Management Issues or Concerns:

Since black spruce is normally found on lowland sites only accessible during frozen conditions, accessibility of the resource is a major issue, especially with what seems to be our recent trend of milder winters.

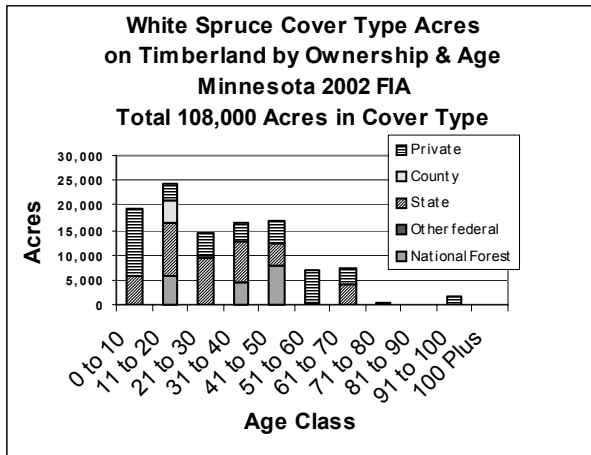
There is often low volume per acre in black spruce stands. This increases logging costs, which not only affects logger profitability, but can also impact product production costs all the way to finished product. It can impact our ability to manage some stands.

Red rot can be prevalent in wood on some sites, especially in older stands. High levels of rot can have a major impact on stand merchantability, and therefore our ability to manage these stands. Wood with a high percentage of rot is undesirable or unusable for many higher-value wood products, of course.

White Spruce

White spruce is a relatively young resource. The cover type is dominated by stands below the age of 50, much of which is in the form of plantations. Recommended rotation ages can range from 60 to 90 years, depending on site productivity and condition (again, some stands managed as extended rotation are held beyond these ages). White spruce is located most often on upland sites, where in natural stands it is commonly found mixed in as a component in aspen, birch, balsam fir & pretty much all upland cover types.

The 2002 FIA inventory indicates cover type acreage of about 108,000 acres, up nearly 7% from 1990.



Some Management Issues or Concerns:

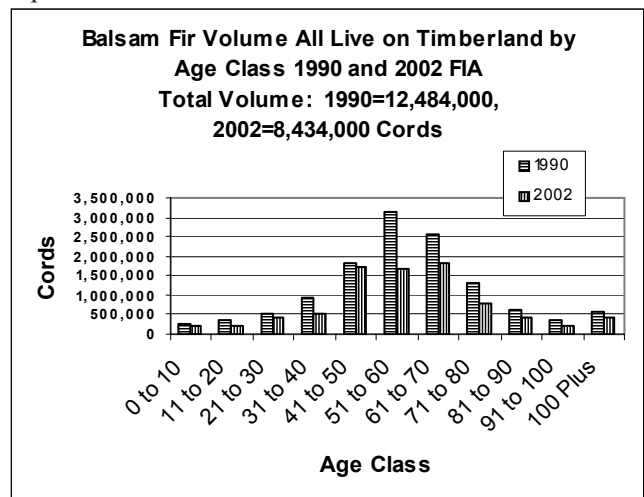
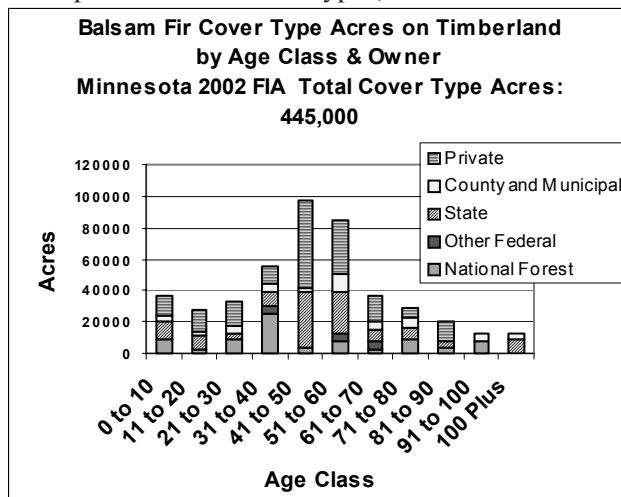
Spruce budworm is a defoliator that has caused top kill and mortality on white spruce, (including plantations). This impact can be lessened by management activities such as thinning to maintain stand vigor and by discriminating against balsam fir in some mixed stands (balsam fir is the preferred host for spruce budworm).

There will be increased opportunities for thinning white spruce plantations over the next decade, as stands move into merchantable size classes. Thinning normally yields excellent quality pulp with only minor loss to rot. It can be lower volume productivity work for loggers, however.

Balsam Fir

The balsam fir cover type has undergone some major changes since the 1990 inventory, due mainly to high mortality caused by spruce budworm defoliation. Cover type acreage went down approximately 39% from 1990 to 2002 (733,000 acres in 1990, down to 445,000 acres in 2002).

Most of the balsam fir cover type is privately owned, followed in decreasing order of ownership acreage by our two national forests, the state, and counties. The cover type is dominated by stands at and above 40 years, so it is a relatively old resource for such a short-lived species. Recommended rotation ages can vary with stand productivity and site condition, with 50 years a common average (again, stands managed as extended rotation are carried beyond this age). Much of the balsam volume in Minnesota (51%) is found mixed in with the aspen and birch cover types, and is therefore tied to aspen and birch harvest.



Balsam fir industrial use is similar to that of spruce. It is used largely for making of high quality paper, where it is prized for its excellent fiber qualities. Some is also used by the sawmill industry, mostly in making studs

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Partners Help Regional Wood Industry Gain Competitive Edge

Our friend Brian Brashaw of the Natural Resources Research Institute (NRRI) in Duluth sent us the following article about an exciting effort he is leading whose focus is on helping wood product businesses in the great lakes region remain competitive:

“You just can’t expect to keep doing things the same way and get different results.”

This is the message the Great Lakes Wood Manufacturing Partnership is getting out to regional wood products companies to keep them competitive in an increasingly global economy. By helping employees rethink what they do and how they do it, the Partnership is strengthening the company from the bottom up.

The Natural Resources Research Institute (NRRI) University of Minnesota Duluth is coordinating this team approach to helping wood products companies significantly improve their processes and products.

Your business can participate: The Partnership will add private companies from Minne-

sota, Wisconsin and Michigan during the remaining 2 years of the project. They are offering free tours of companies that have implemented lean manufacturing techniques in order to expose others to this method. The Partnership will also provide opportunities for “lean” training and will facilitate sessions to fit your company’s needs and help it become more competitive.

So far the Partnership has successfully adapted continuous improvement techniques (often referred to as “kaizen blitz”) by incorporating it with lean manufacturing principles. It works like this: a specific problem is identified on the factory floor—perhaps a need to reduce waste or become more efficient at a task—then a facilitator provided by the Partnership leads a team of company employees toward improving or solving the problem. They also look at how to sustain the improvement.

Input from all over the company is important. Team members are pulled from manufacturing, quality, sales, purchasing, engineering and management. It’s the people who do the job every day who have the

best insight into what could be done better.

“These folks are the ‘experts’ of their production process,” said NRRI wood products specialist Brian Brashaw, coordinator of the Partnership. “Employees can do outstanding work and should be more involved in eliminating waste and improving the whole process.”

Whether in a one week training “blitz” or in sessions spread over a couple of months, the Partnership focuses on teaching proven lean manufacturing principles, best practices in manufacturing and helping the teams identify company-specific continuous improvement projects.

Success Stories

The Partnership held a successful one-week blitz at **Ferche Millwork in Rice, Minn.**, to help them develop an efficient and standardized inventory replenishment system. The team’s new system reduced inventory levels by 20 percent, improved productivity, reduced floor space and established a repeatable continuous improvement process for the mill.

“The training was very successful, but really just hit the surface of what we’ve been able to do with it,” said Ferche Millwork President Gerald Grider. “The structure they helped us set up gave us the discipline to follow up with additional projects. They did a great job of teaching principles that could be duplicated by our staff here. We’ve always had really positive interactions with NRRI and that’s why we were eager to have their help.”

Sessions held over many weeks at **Northern Contours of Fergus Falls, Minn.**, helped increase the productivity of their veneer processing operation with a new production process and floor layout. They reduced their lead-time by 80 percent while also reducing production costs. And worker satisfaction is still running high.

“The key to lean manufacturing is getting employees to take ownership instead of just coming to work and doing their job,” said Northern Contours General Manager Duaine Miranowski. “Giving our production employees a voice in how to improve

our products has been great. Now they're always thinking about ways to do things better and they're enthusiastic about the changes."

Rockland Industrial Products in Red Wing, Minn. and Rockland, Wisc., developed a process for strategic product development and project selection. They used the process to screen out and identify two new products for 2004, putting them in a better position to compete in their industry.

Other companies have also reaped benefits from Partnership training specific to their company needs:

Crystal Cabinets of Princeton, Minn. focused on general continuous improvement projects improving their dovetail cabinet drawer design and the manufacturing layout.

Smurfit Stone Container of Ontonogon, Mich., was able to identify solutions to some long-standing clinker problems.

Horner Flooring Company of Dollar Bay, Mich., developed a gainsharing program along with continuous improvement processes to achieve cost reductions and increase productivity.

The Great Lakes Wood Manufacturing Partnership is funded by a three-year \$600,000 National Science Foundation "Partnerships for Innovation" grant and company matching funds.

"Existing medium to large manufacturing companies are our focus," said Brashaw. "We want to help them understand and implement the processes that will keep them strong. We don't want to see companies in this region go the way of the North Carolina furniture industry, which has been really hit hard by competition overseas."

Wood product companies are encouraged to request more information about joining the partnership. Contact Brian Brashaw, NRRI partnership coordinator, at 218-720-4248 or bbrashaw@nrri.umn.edu, or contact Keith Jacobson, Minnesota Department of Natural Resources, at 651-296-6491. A Web site has been established at www.niup.net/html/forest_products_initiative.htm#greatlakes2.

SIDEBAR: Great Lakes Wood Manufacturing Partnership Participating Organizations

Public:
Natural Resources Research Institute
University of Minnesota Duluth
Michigan Technological University
University of Wisconsin-Madison
Minnesota Department of Natural Resources
Michigan Department of Natural Resources
Wisconsin Department of Natural Resources
USDA Forest Products Laboratory

Community Development:
Northern Economic Initiatives Corporation

Overview..Continued from page 5

but also in small quantities for other types of lumber. A very small amount of fir is also used in making OSB.

Some Management Issues or Concerns:

Spruce budworm:
Spruce budworm is a native defoliator that has balsam fir as its preferred host. We have had budworm defoliation every year for the past 50 years somewhere in northeastern Minnesota. Defoliation from the most

recent major outbreak peaked at over 500,000 acres in 1995, and has since declined to just over 34,000 acres in 2003. Much of northeastern Minnesota has been impacted. The prognosis is that budworm populations will eventually increase again in the future, causing an increase in mortality. When there are concentrations of balsam fir over 45 to 50 years of age, spruce budworm will increase to take advantage of their preferred food source. If management favoring more conifers in stands, more extended rotation ages, more reserve trees and more mixed stands result in more balsam fir of older ages, then budworm populations will periodically build up to outbreak levels.

As with black spruce, red rot can be prevalent in wood on some sites, especially in older stands. This causes the same forest management and industry concerns as outlined in the black spruce section above.

Though not as big of an issue as with black spruce, there is a fair amount of balsam fir volume that is accessible only during frozen conditions.

Blandin Foundation's Vital Forests/Vital Communities Initiative

The Blandin Foundation initiated a "Vital Forests/Vital Communities Initiative" in late 2002 in order to assist in improving the health of Minnesota's forests and our rural, forest-based communities. The initiative is led by Bernadine Joselyn, the Foundation's Director of Public Policy & Engagement. The Initiative has included two "Call-To-Action" conferences geared toward focusing efforts where they can be most effective and at gaining support and assistance from a wide spectrum of partners. A summary of the second conference, held in December 2003 follows.

Call-To-Action Conference II

On December 10th, a hearty group of over 80 Minnesotans with an interest in the state's forest industries, resources and communities gathered in Plymouth. Their purpose was to continue developing a set of strategies with high potential for increasing the competitiveness of the state's forest-based industries, the vitality of our forest-based communities and the sustainability of the resource on which they depend.

At the first conference in September, over 70 participants volunteered to join Action Teams that worked for 3 months to convert industry and resource management improvement opportunities into strategies for action.

At the December 10 conference, Governor Pawlenty stopped in and had this to say: "We cannot have a healthy, whole Minnesota economy, and we can't have a healthy environment and conservation vision for Minnesota if we don't get our arms around the challenge and the borderline crisis that is taking place with respect to our forests in Minnesota. It's a

hugely important issue, and one that needs more attention than it has received in past years. We are trying to give it that attention, we're trying to give it some voice, and the fact that you have come together in partnership to address these issues is important to us."

The 7 "Action Teams" then presented the results of their 3 months of work in developing proposed strategies and actions for positive change. The teams focused on the 7 areas identified earlier as most important: Forest product market development, ecologically based forest management, private woodland owner education & support, public education, 3rd party forest certification, resource availability and forest productivity.

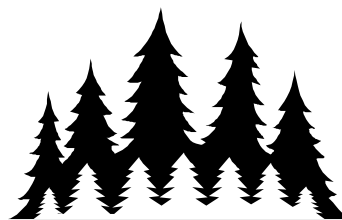
The Action Teams laid a strong foundation for making decisions about which recommendations will be carried forward. The Initiative is clearly focused on **taking effective action that will result in positive change.**

Where is the initiative headed?

The groundwork has now been laid for moving forward in addressing some of the challenges facing Minnesota's forests and forest-based industries & communities. Now the hard work of implementing the most promising recommendations begins.

An Initiative Advisory Board has been formed which, along with input from the Foundation and several outside advisors, will study the recommendations made by Action Teams and then come up with a smaller set of projects that are seen to have the greatest potential for positive impact on Minnesota's forests, industry and communities. These projects will then be carried forward with Foundation and partner support.

For a full report on the Initiative and the recommendations of the Action Teams is available on the Blandin Foundation website at: <http://www.blandinfoundation.org/index.html>





Forest Products Wanted

- WANTED Pine shorts S2S to 3/4" any lengths or widths any grade. Contact: Paul Meisel, Theta Industrial Products, Inc., PO Box 258, Mound, MN 55364; Phone: (783) 479-2138.
- WANTED Pine, aspen or similar softwood species trees in 3" to 8" diameters. Prefer standing live or dead trees. Price negotiable. Contact: Rick Zechmeister, 1945 N Timberwolf Trail, Eagan, MN 55122; Phone: (651) 687-9361.
- WANTED (1) Green lumber for shipment to our Rockland, WI kilns for #2A, & #3A com and frame grade 4/4 & 5/4 red oak, white oak, hard maple & yellow birch, with an emphasis on hard maple at this time. (2) KD stock in the above species & grade into the Red Wing, MN plant. Contact: Lou Chicquette, 2720 N Service Dr, Red Wing, MN 55066; Phone: (651) 388-6150; Fax: (651) 388-3989; Email: jvandeusen@rocklandindustrialproducts.com.

Equipment Wanted

- WANTED Transfer case for 200 TJ skidder need low range gear. Rockwell standard model T3229. Contact: Dennis Freyholtz, 21571 Hwy 71 NE Hines, MN 56647; Phone: (218) 835-4368.



Forest Products For Sale

- FOR SALE Plywood, OSB, particleboard and/or MDF cut to size or shape according to your specifications. Contact: Joe Campbell, Steel City Lumber Co, PO Box 36189, Birmingham, AL 35236; Phone: (1-800) 733-1907; Fax: (205) 733-1109.
- FOR SALE (1) Timber frame homes, trusses, or floor systems, built from re-sawn salvaged Douglas fir beams. (2) Salvaged Douglas fir or southern yellow pine timbers custom-sawed. (3) Douglas fir millwork, baseboards, etc. Contact: Ken Peter, Timber Ridge Custom Woodworking, 3703 Hautala Rd, Cloquet, MN 55720; Phone (218) 879-6656; Email: kimbah4@msn.com
- FOR SALE Northern white cedar products: (1) Cabin logs, 8' – 16'. (2) 8' posts & rails. (3) Chainsaw carving blocks. (4) Shingles. (5) Fireplace mantels. (6) Benches. (7) Square stock 3" to 6" x 8' lengths (8) Rough-sawed lumber 1/2" to 2" x 8' lengths. (9) Various unusual curves and Y pieces for specialty projects. Contact: Duane Maki, Maki Wood Products, 36591 Co Rd 39, Deer River, MN 56636; Phone: (218) 246-8738; Email: makidm@paulvunyan.net.
- FOR SALE (1) Approximately 5000 bd. ft. standing mature white oak. Will custom cut to your specifications – price negotiable. (2) Small quantities 4/4 – 16/4 (some AD, some KD) green ash, birch, butternut, basswood, poplar, white-red pine, red oak & white oak. (3) Will do custom cutting of your logs. Contact: James Mielke, Mielke's Mill, 37885 Park Trail, Center City, MN 55012; Phone: (651) 583-2813; Email: jlmie@ties2net.
- FOR SALE Northern white cedar products: (1) Log furniture material. (2) Round & sawn log home timber. (3) Lumber. (4) Paneling. (5) Fence posts. (6) Wood chips. (7) Bark & sawdust. (8)

4"-5"x8' rough cedar post at \$125/cord. Contact: Richard Hufnagle, Page & Hill Forest Products, Inc, 7556 Co Rd 31, Big Falls, MN 56627; Phone (218) 276-2251; Fax: (218) 276-2352; Email: pagehill@citlink.net.

FOR SALE (1) Quarter- sawed clear maple and red oak, 6/6 to 12/4, various widths. (2) 4/4 birch and ash. (3) 4/4 flat-sawed maple, ash, oak & butternut, various lengths to 5'. Contact: Tim Brault; Phone: (320) 679-4835; Email: brault@voubetnet.net

Equipment For Sale

FOR SALE (1) Used parts for skidders, small crawlers & excavators. (2) Parts for CAT, JD, IHC, AC, MH, Athey, Bantam/Kohering, Bobcat, Case, Clark, TJ, Drott, Franklin, Hein-Warner, Insley, Leiberr, Michigan, Mitsubishi, New Holland, New Process, Pettibone, Taylor TF & Trojan. (3) Engines, transmissions & tires. Contact: Dick, Kevin, Rodney or Gina, Schaefer Enterprises of Wolf Lake, Inc, PO Box 136, 4535 State Rt. 3 N, Wolf Lake, IL, 62998; Phone: (800) 626-6046 or (618) 833-5498; Fax: (618) 833-7765; Email: parts@sewlparts.com; Website: www.sewlparts.com.

FOR SALE JD 350 dozer w/ blade, ROPS & winch with good engine and tracks. Contact: Gale Gabriel, W20102 Irvins Coulee Rd, Whitehall, WI 54773; Phone: (715) 985-3342; Email: Gabriel@trivest.net.

FOR SALE (1) 1998 York Shipley 200 hp natural gas fired boiler – turbo fire II 8315 btuh, fireeye control M#E110, 10hp blower motor, dual feed pumps & preheat tank, dual water softener, 2 chemical feed tanks & pumps, 8625 lbs, steam/hr at 150 psi., \$30,000 or BO. (2) American wood dryer 43,200 bf capacity kiln (requires one sidewall & door track extension), 42'x24'x24', \$50,000 or BO. (3) American wood dryer 38,400 bf capacity wood drying kiln (requires one side wall & door track extension 38'x24'x24', \$45,000 or BO. (4) Westinghouse air compressor type y, model #3yc, 5hp, 480 volt, mounted on 80-gallon horizontal tank, \$800 or BO. (5) Pacline overhead chain conveyor system, can be used for material handling and/or finishing operations, 250' chain, 240' straight track, 2 sets 45-degree "s" turns, 2-90 degree horizontal. Curves, 4-180 degree horizontal curves, track hanger clamps, variable speed control, \$6,500 or BO. Contact: Al Ladd, Walnut Hollow Farm, Inc, 1409 State Rd 23, Dodgeville, WI 53533; Phone: (608) 935-2341 or (608) 935-3713; Email: alladed@walnuthollow.com.

FOR SALE (1) Yamani double-cut band grinder. (2) Armstrong #2 filing room setup. (3) Precision sharpening device for counter-grinding chipper knives in place. (4) Brush chipper w/Ford V-8 power. (5) 32" double surfer. (6) Two Newman 4-sided planers. (7) 24" single drum sander w/new 25hp motor. (8) Two tool grinders. (9) Hanchett circular saw grinder. (10) Vollmer automatic top & face-grinder. (11) Vollmer side grinder for bands & circulars. (12) 60" laminate roller. (13) Murphy 160hp diesel power unit. (14) Three up acting cutoff saws. (15) Baker horizontal band resaw model BBR. (16) Three vertical band resaws. (17) Enercraft band mill 30"x25' cap. (18) Stake pointer. (19) Gothic fence machines. (20) Three circular scraggmills. (21) Ag spray truck w/floaters. (22) Mattison 202 straight line rip saw. (23) Five logdecks. (24) Dock leveler. (25) New wood fired vertical boiler 10-12 hp. (26) Gangsaw w/ 12" strobe saws. (27) Reconditioned Owen Smith setworks. (28) Lathe making setup, cap. 2400/hr. (29) New pallet stringer knotcher. (30) New & used powered parachutes. (31) Clark cable skidder w/353 engine. (32) 5510 Iron Mule forwarder. (33) New & used inserted circular saws 12"-60". (34) Expandable green chain 20' to 70'. (35) Aquatherm wood fired boiler – needs controls. (36) Video showing how to replace shoulders in circular sawmill blades. Contact: Kent Erding, RR1, Box 81, Wykoff, MN 55990; Phone: Work (507) 352-6546; Home: (507) 352-4098; Email: sawfast@hmtel.com.

- FOR SALE (1) Bark processing plant; conveyor & hopper infeed, first big roller screen, Patz chain conveyor under screen, Patz inclined chain conveyor, second roller screen w/conveyor transfer, 40' Patz inclined chain conveyor, Nugget conveyor. (2) Cornell blowers, edgers, trimmers, notchers, slabsaws, log cleaners, unscrambler, decks. (3) Valby wood chippers. (4) Farmi skidding winches. (5) Hitachi –power tools & chains. (6) Patz conveyors & belts. (7) Lacy- Harmer – laser lights. (8) Danco rip saws. (9) Webster vibrating conveyors. (10) Jonsered chainsaws. (11) Dixon sawmills, edgers, conveyors, log turners, hydra-dogs, pallet notchers, debarkers, slab edgers, trimsaws, decks rollcases, small hydraulic loaders & trailers- with loaders for 4 wheelers. (12) Safe-T-Shelters storm shelters. (13) Over 100 electric motors & equipment. (14) Dixon line of sawmill & logging equipment. (15) Three sizes of circular sawmills. (16) Two sizes of edgers. (17) Mills & edgers stationary & portable. (18) Log turners. (19) Belt & chain conveyors. (20) Rollcases. (21) Log turners. (22) Hydra-dogs. (23) Pallet notchers. (24) Slab edgers. (25) Debarkers. (26) Multiple saw trimers. (27) Custom built decks. (28) Small & medium hydraulic loaders & trailers. Contact: Rusch Equipment Sales, 400 Rusch Rd, Antigo, WI 54409; Phone: (715) 627-4361; Fax: (715) 627-4375.
- FOR SALE Portable left-hand sawmill, all metal frame 28' long with steering transport system. Operated w/ 32" blade (2) included. Takes 16" to 14' logs, operated with belt drive, belt included. Has its own independent hydraulic unit which operates the feed system. Contact: Don Hannesson, 807 11th Ave, Langdon, ND 58249; Phone: (701) 256-3279.
- FOR SALE (1) 2000 JD 648GII. (2) 1997 JD 548G. (3) 1996 JD 648G. (4) 1990 TJ 450B Grapple. (5) 1985 TJ 230 cable. (6) 1998 Prentice 210E w/Saw Buc. (7) 1993 Prentice 210D. (8) 1998 Hydra-Ax 511 EX w/Koerhing saw head. (9) 1996 JD 643D w/Koerhing sawhead. (10) 2001 JD 650HLT w Forestry pkg, 6 way blade, ac, winch & log arch, 1400 hrs. (11) 2001 Pitts 30' log trailer,- 3-bunk. (12) 2001 Challenger 35 ton self- contained RGN. (13) Hough rubber-tired loader w/log forks. (14) 2001 TJ 1270D processor/harvester. (15) Meadows automatic 3 HP portable mill. (16) Chip-pac's edgers, nailers, log decks, pallet stackers. (17) Complete set of Firestone tires 23.1, 60%. Contact: Weber Forest Machinery, 303 Seward Rd., Brentwood, TN 37027; Phone: (615) 373-8809.
- FOR SALE (1) Atlas hand filer, grinder, spider gauge, stationary grinder, saw worker, saw hammering bench. (2) Seneca Saw Works saws, complete line saw hammering supplies. Contact: Seneca Saw Works, Inc., 3843 Main St, Burdett NY 14818; Phone: (607) 546-5887; Fax: (607) 546-5889; Email: sawworks@ptd.net.
- FOR SALE Hydraulic sawmill carriages, Mudata networks, tower dogs, cant turndowns. Contact: Jackson Lumber Harvester Co, Inc, 830 N State Rd 37, Mondovi, WI 54755; Phone: (715) 926-3816; Fax: (715) 926-4545. Email: info@jacksonlbrharvester.com. Web: www.jacksonlbrharvester.
- FOR SALE 1990 Frieghtliner, FLD120, 425 cat, 13 speed, 60" sleeper, 90,000 miles on overhaul, \$11,500 or BO. Contact: Tim Hayes, Hayes Trucking, 24312 255th Ave, Pierz, MN; Phone: (320) 745-2299.
- FOR SALE (1) Rip-mate return conveyor for straight line or gang saws, no "rubber bands" or rollers. (2) Verti-cart material cart replaces up to 6 standard carts while keeping small runs separated. (3) Moulder-mate out-feed support system.. Contact: Mike Preuss, Edge Equipment Inc, PO Box 184, Belview, MN 56214. Phone: (507) 938-4130; Fax: (507) 938-3000; Email: edge@redred.com

FOR SALE (1) Skidder-640 D JD, sorting grapple, winch, extra mounted tire, \$17,000. (2) Sawmill set works 1 5/8" shaft, \$250. (3) Sawmill carriage, 4 tracks, receder, \$2000. (4) Three other sawmills, Howell #3, & others. (5) Lath mill, extra heavy, 12 carbide, saws, no motor, \$650. (6) Saw hammering tools. (7) Beach Mfg. Co. drum sander, oscillating heads, 48" wide, (8) Dixon resaw w/return, 2" to 4" wide bands, 30" wheels. (9) Prentice log loader, model G 10,000 pound cap. 20' boom, truck mount on rear, \$6000 or trade. (10) Diamond knife hog, top feed 8"x2" w/50 HP motor. (11) Corley trimmer ball-bearing, 6' to 20', \$3000. (12) Cutoff saw H&R heavy, will trim railroad ties, air operated, carbide teeth, \$2500. (13) Debarker head, will trade. (14) Conveyor 10' long, raises on one end to direct lumber or slabs to different levels, air operated \$1000. Contact: Tony Beuning, Lake Region Timber Co, 32906 Co Rd 50, Avon, MN 56310; Phone: (320) 356-7107.

FOR SALE Filing room equipment: (1) Armstrong #17-60 automatic circular saw sharpener designed to automatically sharpen 13-60" rip saws & cutoff saws including smooth trim saws. Tooth spacing 1/4 to 3 1/2", depending on pattern. Handles 7/8 to 6" saw eyes. Floor space 50x58", height 80", weight 2050#. Has two 3/4 hp motors & starting switches for 220 volt, 3 phase, 60 cycle-current & variable speed control to the grinding wheel. Needs some reconditioning, asking \$1500, includes parts & instruction manuals. (2) Armstrong #4 automatic band saw sharpener, right hand. Handles 6 to 14" inch wide saws. Has Armstrong #58 filing clamp, 3-#16 hand adjusting post brackets, 1-#17 automatic post bracket & 1-#18 back feed guide & feed mechanism, two motors 1/2 & 3/4 hp, 220 volts, 3 phase, 60 cycle. Needs some cleaning & reconditioning, \$1500 w/parts & operating manual. (3) Hanchett #407 band saw filing clamp, handles up to 10" wide blades, clamp length 48", height is about 36", good condition, \$100. (4) Four Hanchett band saw post brackets for supporting band saws when using a band saw filing clamp or band saw grinder, \$25 each. (5) Hanchett #82 band saw stretcher rolls, without retoothers, w/movable rolls for tensioning band saws up to 12" wide. Has 1 1/2 hp motor, wired for 220/440 volt, 3 phase, 60 cycle current. (6) Bandsaw leveling blocks 2- 10"x48"x4" & 12"x48"x4" \$400 each. Contact: Tom Milton, University of MN, Dept of Wood & Paper Science; Phone: (612) 624-5307; Email: tmilton@umn.edu.

FOR SALE (1) 671 V6 Detroit power plant, \$1200. (2) Antique saw blade 48", 9-10 gauge, circa 1890's, \$400. Contact: Roger W. Kelly, Trickle Creek Lumber Co, PO Box 36, Hovland, MN 55606; Phone:(218) 475-2383.

FOR SALE (1) Pinero – 3 phase 4- sided planer 6"x18" throat tooling for ship lap 45q & v-joint. (2) Blower & engineered duck work. (3) 40' chip van. (4) Hyster Super 6- 48" forks, Ford ind. 6, 300 cid, telescoping boom (5) tractor chains. (6) 450 B dozer w/6 way blade. (7) Tower end trim saw 6 to 20', extra set of saw blades w/40 hp 3 phase motor. Contact: David Beer, Waconia Wood products, Inc., 8519 Pederson Rd, Cook, MN 55723; Phone (218) 780-0173; Fax: (218) 666-2043; Email: dgbeer@lop2.net.

FOR SALE (1) Prentice stationary loader w/5th wheel. (2) Rodgers Un-nailer w/10" blades. (3) Rip-Jac over & under pallet dismantler. (4) Waechter band resaw. (5) Morbark model 640 debarker. (6) Morbark PortaPac sawmill. (7) Fastline log merchandiser. (8) Bronco pallet stackers. (9) Lauderdale Hamilton super chop pop-up trimmer. (10) Newman chamfering machine. (11) Cornell double arbor resaw w/cut up system. (12) Cornell remote trim saw. (13) Cornell cant sizer. (14) Pendu diesel powered M5000 gangsaw w/log cabin tooling. (15) Pendu A5000 double arbor resaw system. (16) Pendu A4000 w/cutoff. (17) Brewer gang saws. (18) Wilson 4 strand unscrambler w/Corley pkg deck. (19) Arasmith salvager hog w/50"x 50" opening. (20) Woodpower T-60 grinder. (21) Morbark waste recycler. (22) Williams C-32 No-Nife hog. (23) Hempstead low speed whole pallet grinder. (24) Keystone stake pointers. Contact: Bob Montgomery; Phone: (610) 678-5703; Fax: (610) 678-5955; Email: montcowp@yahoo.com.

FOR SALE Cable skidders; (1) 1967 225 TJ, \$6,500. (2) 1969 C4 TF, P.O.R. (3) 1973 C5 TF, \$7,500. (4) 1970 440A JD, \$10,500. Grapple skidders; (1) 1993 518C Cat, new trans., \$40,000. (2) 1989 170XL Franklin, 5 cyl Cummins, \$16,000. (3) 1991 450B TJ, Cummins eng., \$18,000. (4) 1998 460 TJ, dual function, \$52,000. Crawlers; (1) 1993 D31P20 LGP Komatsu dozer, \$25,000. (2) 1995 D3CLGP, new undercarriage, \$33,000. (3) 1975 450C 6-way blade, \$12,500. (4) 1990 650G, 6-way blade, \$35,000. Knuckle boom loaders; (1) 1998 160D Barko 72" slasher, \$72,000. (2) 1987 210C 6 cyl JD slasher pkg, \$27,000. (3) Prentice 90 on tandem truck, 19' bed, \$8,500. Trucks; (1) 1998 Peterbilt, 470 Detroit, 18 sp., \$36,000. (2) 1978 GMC 2-ton w/ hydr hoist, flatbed dump, \$4,500. Excavators; (1) 1990 JD 490D, \$27,000. (2) 1992 Mitsubishi MXR55, \$12,000. Delimiters; (1) 1981 743 JD, \$15,000. (2) Siro delimiter/slasher, \$7,000. (3) 1985 125B Case w/3000 Denis, \$27,000. Feller-bunchers & shears; (1) 1979 Drott 40, shearhead, \$17,000. (2) 1978 Drott 40 JD eng, \$13,000. (3) 1993 JD 590D w/18' Roto saw, \$29,000. (4) 1998 JD 653E w/20" Cameco sawhead, \$98,000. (5) 1993 T445 Timbco, w/22" Wuadco sawhead w/side tilt, \$95,000. (6) 1993 Risley Black Magic w/Risley sawhead, \$65,000. (7) 1976 544B JD \$17,000. (8) 1976 544B JD, 20" shear, \$21,000. (9) 1988 910 Cat, 17" shearhead, rebuilt trans, \$32,000. Wheel-loaders; (1) 4500 Ford backhoe, \$7,000. (2) 1992 410D JD backhoe, \$27,000. (3) 544B JD, \$15,500. (4) 1979 544B JD, \$18,500. Miscellaneous; (1) 1979 Bobcat 731 Skidsteer loader, \$6,700. (2) CAT V80D 8,000# forklift, \$6,500. (2) 54" slasher w/power unit, \$6,500. (3) 60" slasher w/power unit, \$14,500. (4) 20" Koehring sawhead to fit 643 JD, \$9,000. Contact: Northern Timberline Equipment, Inc, 6000 County Rd 8, Littlefork MN 56653; Phone: (218) 278-6203; Fax: (218) 278-6716.



Services and Miscellaneous

- SERVICES** Can change Disston "C" saws to "B" style. Saw hammering, welding, collar grinding, troubleshooting, consulting and training. Contact: Kent Erding, RR1, Box 81, Wykoff, MN 55990; Phone: (507) 352-6546 or (507) 352-4098; Email: sawfast@hlmtel.com.
- SERVICES** Trouble shooting for moulder, grinder, planer, sander & saw problems. Design and building of automated material handling systems. Contact: Mike Preuss, Edge Equipment Inc, PO Box 184, Belview, MN 56214; Phone: (507) 938-4130; Fax: (507) 938-3000; Email: edge@redred.com.
- SERVICES** We buy & sell pallets & gaylords. Specialize in custom-built small size pallets; Contact: Dave Graff, Otto Pkg Midwest, Pallet Recycling Div, 391 Topping St, St. Paul, MN 55117; Phone: (651) 488-0474; Fax: (651) 488-8616.
- SERVICES** Structural engineering, log & heavy timber frame homes, unusual foundation problems solved. MN & WI registration. Contact: John Wilkinson, Consulting Engineer, 604 2nd Ave N, Sartell, MN 56377; Phone: (320) 253-1019; or (563) 547-1078.
- SERVICES** Reconditioning Montgomery hog teeth, anvils, rings & Zeno grinding machine cutters. Contact: G & G, 2525 Westbrook, Magnolia, OH 44643; Phone: (330) 866-9764; Fax: (330) 866-5225; Email: hgg9407@aol.com; Website: http:www.ggrepair.com.
- SERVICES** On-site repair & instruction on all makes & models of planers, planer matchers, moulders & flooring machinery. Contact: Larry G. Hoth, Midwest Planer Service, H462 Robin Dr,

Stetsonville, WI 54480; Phone: (715) 678-2080; Fax: (715) 678-2402; Email: midwestplanersrvice@excite.com

WANTED Seeking a top performer with 3+ years of industrial lumber sales experience. Offers top compensation plan & fringes. Light travel only. Fax resume. Contact Ken Boehmer, Weekes Forest Products, Inc. PO Box 14327, St. Paul, MN 55114; Phone (651) 644-9807; Fax: (507) 644-9520; Email: kenb@weekesforest.com.

FOR SALE 2004 Historical logging calendar featuring MN, WI & MI. Features historical logging photos from each state, original artwork, depicting life in a logging camp, info on tree species, lumber-jack clothing & logging terminology. Calendars \$10, plus \$3 shipping/handling. WI residents must add 5.5% tax. Send check or money order to: Jeff Peters, Rt 1, Box 131, Mellen, WI 54546; Website: www.historicalcalendars.com (you can order from this website).

TRAINING **Great Lakes Kiln Drying Association Spring Meeting**
The spring meeting will be held April 1-2, 2004 at the Holiday Inn, Mosinee (Rothschild), Wisconsin. The program includes tours of Stetson Hardwoods, Northwest Hardwoods, and Granite Valley Hardwoods on Thursday, and drying-related technical presentations on Friday morning. For more information, contact Harlan Petersen at 612/624-3407 or Harlan@umn.edu

TRAINING **Green Design for Product Designers**
April 24, 2004 (Sat.), 8:00am - 5:00pm, Minneapolis, MN
This workshop will bring product designers, educators and students up to speed on key environmental issues effecting product design, and equip designers with practical skills and easy-to-use tools for incorporating eco-design into their work and their business. Taught by leading experts in eco-design (including Jacquie Ottman, author of Green Marketing: Opportunity for Innovation). Workshop held the day after the EnvironDesign 8 conference in Minneapolis (see <http://www.isdesignet.com/ED/index.html>). For details see <http://www.greenmarketing.com> (click on "Upcoming Events" and go to the top of that page) or contact Kakee Scott at 212/879-4160.

NOTICE: **The University of North Dakota's Energy & Environmental Research Center is looking for wood product businesses interested in demonstrating a portable biomass energy production system.** If interested, contact Darren D. Schmidt P.E., Research Manager, Energy & Environmental Research Center, University of North Dakota, 15 N. 23rd St. Grand Forks, ND 58202; Phone: (701) 777-5120; Fax: (701) 777-5181; Email: dschmidt@undeerc.org; Web: www.undeerc.org.

Utilization & Marketing Staff: All staff other than Keith Jacobson spend only part of their time on U&M.
Keith Jacobson, St. Paul 651-296-6491 Email: keith.jacobson@dnr.state.mn.us
Rick Dahlman, St. Paul 651-296-6502 Email: rick.dahlman@dnr.state.mn.us
Jeff Edmonds, Bemidji 218-755-2894 Email: jeff.edmonds@dnr.state.mn.us
Doug Tillma, Grand Rapids 218-327-4108 Email: doug.tillma@dnr.state.mn.us
Lynn Mizner, Aitkin 218-927-7511 Email: lynn.mizner@dnr.state.mn.us
Jean Mouelle, St. Paul Metro 651-772-7567 Email: jean.mouelle@dnr.state.mn.us
Lance Sorensen, Lake City 651-345-3216 Email: lance.sorensen@dnr.state.mn.us

If you wish to list an ad in the winter issue of the Market Place bulletin, please fill out and return this form by April 30, 2004. There is no cost for placing the ad.

(Examples of items to be listed include stumpage; lumber; logging; sawmill and woodworking equipment; sawing, drying, or marketing services; employment; or other forestry-related items)

Forest Products:	<input type="checkbox"/> Wanted	<input type="checkbox"/> For Sale			
Equipment:	<input type="checkbox"/> Wanted	<input type="checkbox"/> For Sale			
Services/Misc.:	<input type="checkbox"/> Wanted	<input type="checkbox"/> For Sale	<input type="checkbox"/> Available	<input type="checkbox"/> Services	<input type="checkbox"/> Notice

Name: _____ Company: _____

Address: _____ City, State, Zip: _____

Phone: _____ Fax: _____

E-mail Address: _____

Please Note: Due to limited space not all ads will be printed in every issue. Please limit your ads to one page or less. Ads will not carried-over from one issue to the next, please resubmit them once for each issue.

Mail Ads To:

DNR Forestry
 Keith Jacobson, Utilization & Marketing Forester
 500 Lafayette Rd
 St Paul, MN 55155-4044
 Phone (651) 296-6491; Fax: (651) 296-5954
 keith.jacobson@dnr.state.mn.us

Phone/Fax:

E-Mail:

The Minnesota 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.

DNR Forestry Timber Auction Sales

Date	Auction Type	Sales Name	Location
01/29	Intermediate	Bemidji-Blackduck Areas	Bemidji Area DNR Forestry Office
01/29	Regular	Joint Bemidji Area – Cass County Land Dept Sale	Bemidji Area DNR Forestry Office
2/19	Regular	Winona-Houston-Fillmore Counties	Rushford Fire Hall
3/29	Regular	Goodhue/Wabasha Co	Lake City DNR Office
4/01	Regular	Warroad-Wannaska Area	Grygla Community Center
4/01	Intermediate	Warroad-Wannaska Area	Grygla Community Center
4/08	Regular	Bagley Area	Bagley DNR Forestry Office
4/15	Regular	Cambridge Area	Cambridge Area Forestry Office
4/16	Regular	Winona-Houston-Fillmore Counties	Rushford Fire Hall
4/30	Regular	Two Harbors Area (West Half)	Two Harbors DNR Office
5/10	Regular	Two Harbors Area (East Half)	Cook County Courthouse
5/11	Regular	Park Rapids	Park Rapids
6/04	Intermediate	Backus Area	Backus City Hall
6/07	Regular	Orr and Tower Areas	Orr City Hall
6/07	Intermediate	Orr and Tower Areas	Orr City Hall
6/08	Regular	Baudette Area	Baudette DNR Forestry Office
6/08	Intermediate	Baudette Area	Baudette DNR Forestry Office
6/09	Regular	Blackduck Area	Blackduck Senior Center
6/09	Intermediate	Blackduck Area	Blackduck Senior Center
6/10	Regular	Warroad-Wannaska Area	Warroad City Hall
6/10	Intermediate	Warroad-Wannaska Area	Warroad City Hall
6/17	Regular	Aitkin and Sandstone Areas	McGrath Forestry Office
6/22	Regular	Cloquet Area	Cloquet Forestry Office



The Market Place
DNR Forestry
500 Lafayette Rd
St. Paul, MN 55155-4044
Website: <http://www.iic.state.mn.us/finfo/luse/harvest.htm>

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