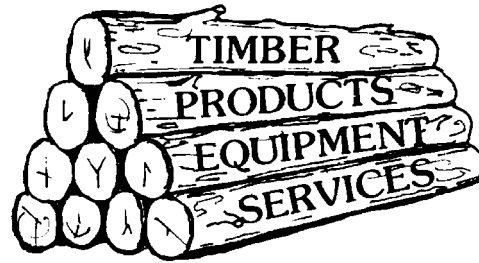




A Service to
Minnesota's
Forest Industry

The Market Place



Summer 2007

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Hope you enjoy it!

Keith Jacobson

MarketPlace Bulletin

The MarketPlace Bulletin is published four times annually by the Minnesota DNR Wood Products Utilization & Marketing staff and is distributed free of charge. It serves the wood industry of the state by providing relevant information on forest industry and forest resources, and by listing forest product and related items wanted, for sale, equipment for sale or wanted, services provided and employment opportunities. The Bulletin has a mailing list of over 3,000, and is also available on the internet at: <http://www.dnr.state.mn.us/publications/forestry/marketplace/index.html>.

Persons can begin receiving the bulletin, or cancel a current subscription, by making a request by phone at: (651) 259-5270 or by email: keith.jacobson@dnr.state.mn.us.

Woody Biomass Update

Forestry Opportunities/ New Guidelines/ Biomass Appraisal

Thanks to DNR staff Doug Tillma, Dick Rossman and George Deegan for their assistance in preparing this article.

Woody biomass continues to be a topic of much discussion and activity in Minnesota. Our feature article will focus on some forestry opportunities presented by developing biomass markets, a brief overview of newly developed biomass harvesting guidelines, and some basic appraisal information.

As a reminder, woody biomass will generally come from portions of the forest resource without traditional forest product markets such as: tops and limbs, small diameter timber, some forms of wood manufacturing residue, and sometimes brush.

FORESTRY OPPORTUNITIES

What are some forestry opportunities from the developing biomass markets?

Biomass From Logging Residue

In addition to local economic benefits, use of biomass material can have positive forest management implications on some sites. On some sites, removal of some top and limb "slash" can:

- Improve ease and success of regeneration
- Reduce fuel loading and fire danger
- Reduce potential insect & disease buildups, such as with bark beetles.

Logging residue is by far the largest potential landowner-supplied source, along with a bit of small diameter timber and low merchantability species, currently being used in biomass markets (many facilities use strictly mill residue). Much of the logging residue resource is currently untapped, unless one happens to be pretty close to a biomass market.

The other potential biomass sources from forestland outlined on the next page are largely theoretical at this point, but do hold promise for the future. The economics of harvesting and processing biomass material from these other sources are the biggest impediment to their use at present. However, there are folks working hard on developing practical harvesting and processing systems that could make these sources a reality.

Biomass From Forest Health Management and Invasive Species Control

Opportunities may include small diameter pine thinnings and utilization of tops and limbs for bark beetle control, spruce sanitation harvests to control dwarf mistletoe, early spruce thinnings, tamarack salvage after larch beetle, white spruce and balsam fir salvage after spruce budworm, and localized outbreak salvage, especially for two-lined chestnut borer. If Emerald Ash Borer (EAB) should have an outbreak in Minnesota requiring sanitation of ash in an infection center, utilization of trees for biomass could be an important strategy for reducing cost and improving treatment effectiveness.

Brush From Brushlands

There can be excellent wildlife habitat benefits from management of brushlands. Brushy areas are sometimes “sheared” with bulldozers to either set the vegetation back to an earlier age, or establish a more open, grassy condition. Costs of managing this resource may be reduced by sale of some harvested brush material for biomass markets. Economics and practicality of using brush from brushlands for energy markets is being examined, especially by the Laurentian Energy Authority (LEA) in Virginia and Hibbing.

“Precommercial Thinning” and Timber Stand Improvement (TSI)

A resource of currently unmerchantable woody material is produced during forest management activities such as very early thinnings. If the economics can be made to work, and ecological concerns are addressed, the potential forest management benefits of being able to accomplish more of this work would be significant.

Dedicated Energy Crops

Very small acreages of Short Rotation Woody Crops (SRWC) are currently being grown specifically for energy in Minnesota. Most SRWC in Minnesota is hybrid poplar, most of which will go to the highest value markets such as pulp & paper and OSB. Even if the main stems go to other markets however, the top and limb portion of the harvested trees could fit biomass energy markets nicely.

Land Clearing Projects

There is a significant resource from powerline clearing and road projects. Past practice has been to dispose of this material on-site through open burning or sometimes chipping and spreading the material. Challenges to greater utilization include keeping dirt off of the material, changing contracting language and procedures, and even changing the mindset of many folks who do road and powerline building and maintenance.

WOODY BIOMASS HARVEST AND SALE

Woody biomass sales are an emerging issue, so there are some unknowns regarding best procedures for accomplishing its sale. It will be important to follow new and existing forest management guidelines when harvesting biomass. It is also important to have procedures for biomass appraisal prior to sale. More standardized procedures will develop over time, but for now, the following is guidance that is pretty much “state of the art” at this time. For private landowners interested in selling biomass or any other timber, I recommend working with a forestry professional.

Biomass Harvesting Guidelines

How Much Biomass Can be Used, While Still Maintaining Wildlife Habitat, Soil Productivity and Water Quality? Concerns over maintenance of soil productivity, some forms of wildlife habitat, and riparian area function have resulted in the recent development in Minnesota of new Minnesota Forest Resources Council (MFRC) guidelines for harvest of woody biomass. These guidelines supplement current timber harvesting guidelines.

New MFRC guidelines to direct the harvest of biomass from forest harvest sites and brushlands were developed over the past year. The new Guidelines have been approved by MFRC, but are undergoing a process to incorporate them into the current guidelines. Fully integrated versions of the guidelines are scheduled for distribution this fall.

Current Harvesting Guidelines Relevant to Woody Biomass Harvest

Current guidelines relevant to biomass harvest include those that deal largely with three issues: 1) wildlife habitat, 2) soil productivity, and 3) riparian areas and water quality.

The following are very brief guideline summaries. Managers need to review actual guidelines in order to see the full text, rationale and context. Current guidelines are available online at: <http://www.frc.state.mn.us/FMgdline/Guidebook.html>

1) With regard to wildlife habitat:

--Guidelines require retention of some down woody debris, snags and leave trees.

2) With regard to maintenance of soil productivity:

--Guidelines suggest that two types of sites are of greatest concern for removal of tops and logging residue: A) Lowland conifer sites on organic soils. These types of sites are largely occupied by black spruce. B) Aspen and other hardwoods on very sandy, or very shallow, soils.

3) With regard to riparian areas and water quality:

--Guidelines recommend retaining significant amounts of live vegetative cover.

New Biomass Harvesting Guidelines

On most harvested sites, there are volumes of logging residue in excess of that needed to address guideline recommendations. The newly developed biomass harvesting guidelines allow for the removal of some of this “excess” biomass, while still maintaining wildlife habitat, soils, and water quality. The newly developed biomass guidelines supplement current guidelines. A few highlights follow. ***These are brief summaries of a few highlighted portions of the biomass guidelines for forest management sites. Managers need to review actual guidelines in order to see the full text, rationale and context.*** Draft copies of the new biomass harvesting guidelines are available online at: <http://www.frc.state.mn.us/>.

1) Biomass Harvest on Sensitive Sites

--Avoid biomass harvest in native plant communities that are listed in Appendix J of the guideline book, and within specific sites where Endangered or Threatened Species are known to exist. Biomass harvesting may be appropriate in these areas if used as a tool to improve management of potentially impacted communities or species. For assistance with locations and management of sensitive native plant communities or endangered or threatened species, consult the local DNR Office.

2) Managing Water Quality and Riparian Management Zones (RMZs)

--Avoid harvest of additional biomass from within RMZs, and within 25 feet of a dry wash bank when managing near a dry wash in southeast Minnesota, over and above the tops and limbs of trees normally removed in a roundwood harvest under existing timber harvesting guidelines.

3) Managing Soil Productivity

--Do not remove the forest floor, litter layer and/or root systems for utilization as biomass (Some silvicultural prescriptions may call for disturbance of forest floor, but removal of this material or piling should be avoided).

--Plan roads, landings, and stockpiles to occupy no more than 1-3% of the site.

--Avoid additional biomass harvest from erosion-prone sites (e.g., those sites on steep slopes of 35% or more) over and above the tops and limbs of trees normally removed in a roundwood harvest under existing timber harvesting guidelines.

--Ensure that landings or on-site areas used to store biomass are in a condition that favors regeneration and growth of native vegetation and trees after use.

4) Re-entry into Previously Harvested Sites to Remove Biomass

--Residue from timber harvests and other forest management activities often remain on-site either scattered or piled, after management activities are completed. The preference is to remove biomass at the time of harvest. If re-entry is necessary, caution should be used so that future forest regeneration is not reduced and infrastructure rehabilitation efforts are not compromised. **Additional Consideration:** Piles left on site for an extended period may be inhabited by species such as Canada lynx, black bears, and other wildlife known to den in slash piles. Retain the slash piles showing evidence of use and consider retaining those that are difficult to access.

5) Managing / Retaining Wildlife Habitat and Structural Diversity

--Retain stumps and uprooted stumps.

--Retain snags and pre-existing coarse woody debris.

--Retain and scatter tops and branches from 20% of trees harvested in the general harvest area (1 “average-sized” tree out of every 5 trees harvested).

--Avoid removing tops and limbs resulting from incidental breakage left in the general harvest area.

--If harvesting brush and small trees for biomass associated with a timber harvest, leave 20% of this material on the site (this material can be run over or cut, but should remain on the site).

--The over-all goal for Fine Woody Debris (FWD) retention is to retain about 1/3 of the FWD on a site. This is achieved by intentionally retaining 20% of the

BIOMASS MARKETS

Two main factors keep small-diameter timber, tops and limbs, and brush from being used for most traditional forest products: The high bark percentage, and the higher cost of processing small diameter material. Woody biomass is a good fit for a number of products and markets, however. Existing markets for woody biomass in Minnesota include:

Engineered Wood: The Georgia Pacific hardboard mill in Duluth and the International Bldrite insulite mill in International Falls are two engineered wood product mills in Minnesota that take bark-on chips.

Special Forest Products (SFP): Markets include log furniture, craftwood, etc. Small volume, high value.

Landscape Mulch: Most landscape mulch is made from urban wood residue and wood manufacturing residue. Markets are limited in rural Minnesota.

Animal Bedding The dairy and poultry industries use sawdust and shavings as bedding. There is some potential to use other biomass for part of this market, however. Animal bedding markets are limited in some of the highly forested regions of Minnesota.

Energy: Energy is a big market for woody biomass in Minnesota, and is growing. Many primary wood manufacturers have produced energy for their own facilities by utilizing residue from their own mills for many years. There is expanded capacity now, and it will grow significantly over the next several years.

Some of the larger woody biomass energy markets in Minnesota that utilize logging residue as part of their raw material. Most other large woody biomass energy producers currently use mill residue

FACILITY	CITY	STATUS
MN POWER	GRAND RAPIDS	ON LINE
MN POWER	DULUTH	ON LINE
SAPPI	CLOQUET	ON LINE
LEA	HIBBING	ON LINE
LEA	VIRGINIA	ON LINE
CTRL MN ETHNOL	LITTLE FALLS	ON LINE
MN POWER	HOYT LAKES	OPENING 2010

Also on the Horizon:

--A large biomass cogeneration facility in Fort Frances, Canada by Abitibi by Fall of 2008.
 --Several new or expanded wood pellet-making facilities are planned, including an expansion of the former Valley Forest Resources mill in Marcell and a new mill near Mountain Iron under the name Mountain Timber Wood Products. Many other woody biomass-using facilities in Minnesota are undergoing feasibility study.

FWD (tops and limbs from 1 “average sized” tree out of every 5 trees harvested), with an additional 10 –15% achieved by incidental breakage during skidding. Usually more breakage occurs in winter than in summer.

Woody Biomass (Logging Residue) Appraisal

The table below can be used for estimating slash (top and limb) biomass from standing timber volumes, based on cover type and average diameters. These have so far proven to be fairly accurate.

Use the following table to estimate the amount of volume existing in top/limb wood on a sale. Additional chipped product existing in top/limb wood consists of tops and limbs that do not meet DNR Forestry utilization standards. Essentially, this is material less than 3” diameter for cordwood material (all species) and 6” for sawtimber material of conifers, aspen, balm and birch, and 10” diameter for sawtimber material in other hardwoods.

Appraisal of Volume in Top & Limb Wood Based on Cover Type & Diameter		
Cover Type of Stand	Diameter Range (inches)	Additional Amount of Chips in Stand as a Percentage of Appraisal or Scale of the Bolewood
All hardwoods other than Aspen	5 – 9	38%
	> 9	29%
Aspen	5 – 9	33%
	> 9	25%
Pines/Tamarack	5 – 9	14%
	> 9	11%
Other Softwoods	5 – 9	33%
	> 9	23%

Example: Assume an appraisal (or scale) indicates that a sale from an aspen cover type (average diameter > 9 inches diameter at breast height [DBH]) consists of 400 cords. An estimate of the amount of additional product in tops & limbs that could be chipped for biomass would consist of:

Additional Amount of Wood in Stand as a Percentage of Appraisal or Scale = Appropriate % from table, Times the volume of “traditional” forest products appraised on the sale.

= 25% (from Table, Aspen > 9 inches) x 400 cords (sale volume estimate) = 100 total estimated additional cords of top and limb wood that could potentially be sold as biomass.*

Biomass Prices

Base prices for biomass on DNR auction sales are:

Standing Green Materials >3" diameter: \$4.40/ green ton

Slash, Dead and Down Materials: \$ 2.20/ green ton

Readers should be aware that actual prices will vary based on market and site conditions.

* Biomass to be left on site to address management guidelines should be subtracted from this figure.

** Aspen conversion: 2.25 green tons/ cord. Other species conversion factors available upon request.

Final Thoughts

Landowners should be aware that energy markets have tended to be fairly low value compared to traditional value-added forest product manufacturing markets, so even though there are some positive economic impacts, no landowners should expect to get wealthy from biomass sales any time soon.

The nearer to a biomass facility, the more likely you are to see impacts. Distance to markets is critical, especially since energy markets often have historically had a pretty limited procurement range. There are exceptions to this, however, especially when the alternative to biomass is a higher price fuel like natural gas.

Greater use of woody biomass is an emerging issue. It will take some time to sort out on both the natural resource management side, and also the market side. Natural resource management considerations, gathering and processing equipment and systems, and markets, will evolve over time.

2006 Public Stumpage Price Review

As promised last issue, below is a summary of pulpwood average prices received by public agencies in Minnesota from 1998-2006. Gaylord Paulson of our Timber Sales Program assembled the 2006 report. Thanks to Gaylord and all public agency forestry folks who responded to the survey!! The full report, with information on other products such as bolts and sawlogs, is available online at: <http://www.dnr.state.mn.us/forestry/timbersales/stumpage.html>.

Readers should be aware that most timber prices have dropped significantly since 2006. Information on recent DNR auction prices can be found online at: <http://www.dnr.state.mn.us/forestry/timbersales/index.html>.

Species	Pulpwood (\$'s per cord)*								
	1998	1999	2000	2001	2002	2003	2004	2005	2006
Aspen	20.54	23.40	25.28	28.76	27.36	28.95	37.20	59.70	47.52
Balm	16.95	14.13	25.27	32.06	27.53	25.12	31.71	45.25	38.85
Birch	7.53	7.66	7.69	8.31	8.16	9.04	12.21	20.57	14.76
Ash	5.51	2.28	4.09	3.91	5.86	3.62	5.51	5.43	8.22
Oak	8.98	10.76	9.27	7.74	5.77	4.35	8.28	16.28	18.27
Basswood	4.88	5.67	5.68	5.48	6.51	6.05	6.58	10.64	8.06
Balsam Fir	14.12	12.09	14.84	14.61	13.99	13.46	21.12	33.54	30.56
W. Spruce	19.18	26.62	32.63	29.90	30.51	21.87	31.80	43.39	35.06*
B. Spruce	21.16	20.61	22.23	29.17	27.05	31.96	31.50	43.39	35.06*
Tamarack	7.29	5.79	5.67	6.40	4.11	4.56	6.42	9.84	5.96
W. Cedar	7.31	6.83	8.46	6.74	7.06	4.68	4.60	5.50	9.26
J. Pine	24.72	24.32	21.94	21.63	22.18	21.37	29.46	30.66	37.62
R & W Pine	15.63	17.02	18.61	20.79	20.99	19.55	19.18	29.06	36.59
Maple	--	--	--	--	--	--	--	--	7.98

-- No Data

* Reported as Spruce Species

Notes:

- *The reader should use caution when comparing prices shown in these tables with actual prices received or expected on any specific timber sale. Individual sale prices will vary significantly from the averages shown in these tables due to variability in economic and physical conditions.*
- Average prices based on those reported by Minnesota Counties, Chippewa and Superior National Forests, Bureau of Indian Affairs, and Minnesota DNR-Forestry.
- The various reporting agencies have different fiscal years.
- Some agencies report their data based on timber appraisal estimates, others on actual scale receipts.
- The reported sales data includes numerous different products and units of measure. Conversion factors used: 500 BF/ Cd for hardwoods, 400 BF/ Cd for softwoods.

EDUCATIONAL OPPORTUNITIES

North Woods Workshop Series: 2007

A program of the Minnesota Wood Education Project and Minnesota Wood Campaign. Topics & Dates. For more information on these workshops, contact the Minnesota Wood Campaign at: Tel 1-888-223-5629 / Email MnWoodCampaign@aol.com or MwWoodEducation@aol.com.

1. **Understanding the Green Movement: benefits and costs of green programs.** Dates: September 25 and 26. Virginia, Grand Rapids, Bemidji, Brainerd.
2. **Guerrilla Marketing & Sustainability: unconventional strategies for marketing sustainability.** Dates: October 2 and 3. Virginia, Grand Rapids, Bemidji, Brainerd.
3. **Salesmanship & Sustainability: becoming more effective at selling sustainability.** Dates: October 9 and 10. Virginia, Grand Rapids, Bemidji, Brainerd.
4. **Product Branding & Promotion: breaking into high-value, niche markets.** Dates: October 16 and 17. Virginia, Grand Rapids, Bemidji, Brainerd.
5. **Getting a Return from Trade Shows: strategic thinking for trade show marketers.** Dates: October 23 and 24. Virginia, Grand Rapids, Bemidji, Brainerd.
6. **Building a Selling Web Site: just do it.** Dates: October 30 and 31. Virginia, Grand Rapids, Bemidji, Brainerd.
7. **Issues in Sustainable Management & Harvesting: maintaining quality and quantity over time.** Dates: November 20 and 21. Virginia, Grand Rapids, Bemidji, Brainerd.

Great Lakes Kiln Drying Association Annual Fall Meeting

At the Indian Springs Lodge and Conference Center in Wabeno/Carter (approximately 60 miles northeast of Wausau), Wisconsin. September 27-28, 2007. Tours and discussion topics will be announced later. For more information, contact Bob Seavey at 612/624-3028 or by e-mail at bseavey@umn.edu



Forest Products For Sale

- FOR SALE Northern white cedar products: (1) Log furniture material. (2) Round & sawn log home timbers. (3) Lumber. (4) Fence posts. Contact Richard Hufnagle, Page & Hill Forest Products Inc., 7556 County Rd 31, Big Falls MN 56627; Phone: (218) 276-2251; Fax: (218)-276-2652; E-mail: pagehill@citlink.net.
- FOR SALE 3 1/2" inch thick norway & white pine slabs. Suitable for bar tops / counters or tables. Widths from 13" to 19" bark to bark. Contact: Denis Boulanger or Tina Phelps; Timber Tramps Inc., P.O. Box 101, Side Lake MN 55781; Phone: (218) 969-3208 or E-mail: timbertramps@hotmail.com.
- FOR SALE (1) Northern white cedar logs (2) Fire place mantels (3) posts – various sizes. All hand felled, winter cut and seasoned. Also unique posts to make log beds. Contact: Jim Parson; Parson Logging, P.O. Box 412, Big Falls MN 56627; Phone: (218) 244-9372; E-mail: jparson@citlink.net.

- FOR SALE Small quantities for the crafter: (1) Ash, birch, basswood, butternut, hard maple, red oak – some ¼ sawn, white oak, poplar, spruce, red pine, white pine; Contact: Jim Mielke; Mielke’s Mill & Crafts, 37885 Park Trail, Center City MN 55012; Phone: (651) 583-2813; E-mail jlmiel@ties2.net.
- FOR SALE Clear walnut boards, 4 ¼” x 12” – 9’-2”, and 4” x 22 ¾”- 14’ - 6’ (rough sawn). Contact: Dwayne Hagen; Hagen’s Glass & Paint, 28 N 8th St, Cloquet, MN 55720; Phone: (218) 879-4531; Fax: (218) 878-7933.
- FOR SALE (1) Plywood (2) OSB (3) Particleboard and or MDF, cut to size or shape according to your specifications. Plywood blocks for pallets. Contact: Joe Campbell; Steel City Lumber Company, P.O. Box 36189 Birmingham, AL 35236; Phone: (800) 733-1907; Fax (205) 733-1709; E- mail: joecampbell@bellsouth.net.
- FREE Suitable for specialty products or firewood, 20 cross-sections from residential green ash tree ranging from 15-30+” diameter, average length of @ 2 feet. No rot, some checking present. Drive-up access. Contact: Craig Bundlie, 595 Heinel Rd., Roseville, MN 55113; Phone: (651) 483-0640.

Equipment For Sale

- FOR SALE (1) 380 T J, 453 Detroit, grapple & winch, complete overhaul, all hydraulic cylinder - new pkging, 90% tires, \$8,000/ offer. (2) 20-ton gooseneck Lowboy, new brakes, \$3,000/ offer. Contact: Denis Engebreston, Engebretson Logging, 23836 Leonard Rd, Leonard MN 56652; Phone (218) 968-2379.
- FOR SALE (1) Live deck, has 3 chains. Deck 12 ft wide & 19 ft long. Dismantled & easy to load, \$325.00 (2) Left hand steel blower for sawdust or chips, 16” x 36”, \$200. Contact: Martin Johannessohn; Johannessohn Sawmill, 41842 445 St SE, Lengby, MN 56651; Phone: (218) 668-2804, call evenings or leave message.
- FOR SALE (1) 1980 Cat 931 loader, new paint, \$7500; Contact: Neil Brownell, 27366 240th St, Verndale, MN 56481; Phone: (218) 472-3447, evenings best.
- FOR SALE (1) 1995 J.D. 648G dual arch grapple, 30.5x32 tires 80%, chains, engine 3160 hours, \$32,000. (2) 1989 J.D. 648 dual arch grapple, 30.5x32 tires & chains, \$18,000 O.B.O. (3) 18” & 22” Roto saw heads, \$3500 & \$4900 O.B.O. (4) Cable skidders & used parts & new tire chains. (5) 227 Cat final drives & sprockets. Contact: Carl Huber, Box 31, Mine Center Ont.; Phone (807) 599-2835; Fax: (807) 599-2822.
- FOR SALE (1) JD 440 grapple skidder, \$18,000. (2) Clark 667 grapple skidder, \$15,000. (3) Prentice 210 loader, 60” slasher, 91 frht truck, \$20,000. (4) 1187 Case delimeter, Denis 2000, \$2,500. (5) Cat pay-loader, 910 shear head, bucket forks, \$25,000. Contact: Tim Fish, Willow Creek Logging, 9655 Hwy 11, Roosevelt MN 56673; Phone (218) 242-1683; E- mail: rlumber@wiktel.com.
- FOR SALE (1) Dixon sawmills, conveyors, log turners, hydra-dogs, pallet notchers, de-barkers, slab edgers, trim saws, decks, roll cases, small hydraulic loaders & trailers, trailers w/loaders for 4 wheelers. (2) Cornell blowers, edgers, trimmers, notchers, slab saws, log cleaners, un-scrambler. (3) Valby wood chippers. (4) Farmi – skidding winches. (5) Hitachi power tools

& chains. (6) Patz conveyors & belts. (7) Lacey Harmer laser lights. (8) Danco rip saws. (9) Webster vibrating conveyors. (8) Safe-T-Shelters & storm shelters. (10) Used electric motors & electrical equipment, used sawmill machinery & bark processing equipment. (11) Dixon line of sawmill & logging equipment. (12) Circular sawmills, & edgers. (13) Mills & edgers made both stationary & portable. (14) Custom built decks, small & medium size hydraulic loaders & trailers. Contact: Dixon-Rusch Co, 400 Rusch Rd, Antigo, WI 54409; Phone: (715) 627-4361; Fax: (715) 627-4375.

FOR SALE (1) Used parts for skidders, small crawlers & excavators, - parts for CAT, JD, IHC, AC, MH, Athey, Bantam/Kohering, Bobcat, Case, Clark TJ, Drott, Franklin, Hein-Warner, Inslay, Leiberr, Michigan, Mitsubishi, New Holland, New Process, Pettibone, Taylor, TF, and Trojan. We also have engines, transmissions, and tires. Contact; Schaffer Enterprises of Wolf Lake, Inc., P.O. Box 136, 4535 State Route 3 N., Wolf Lake IL 62998. Contact Andy, Dick, Jim, or Kevin; Phone: (800) 626-6046 or (618) 833-5468; Fax: (618) 833-7765; E-mail: parts@sewlparts.com, or visit our website at www.sewlparts.com.

FOR SALE (1) Arasmith salvager hog. (2) Baker deduster. (3) Brewco. (4) Hempstead low speed grinder. (5) Morbark stac-trac, 1000. (6) Morbark waste recycler. (7) Williams hog. (8) Woodpower model T-72 whole pallet grinder. (9) Prentice mod. 150 loader. (10) Cornell cant sizer. (11) Cornell double arbor gang. (12) Cornel remote trim. (13) Keystone stake pointers. (14) Lauderdale Hamilton super chop. (15) Newman KM-16. (16) Newman 500 & 501 planers. (17) Pendu gang saws & complete systems. (18) Pendu board stackers. (19) RoJo gang saw. (20) Wagner gang saw. (21) Yates A 20 DMD. (22) Hanna Chamferer. (23) Newman KM-16HD. (24) Woods 502 M flooring machine (25) Peerless chip bins (26) WHO 10' tub grinder (26) Hemco air lift trimmer (27) Montgomery horizontal feed hog (28) Cornell edger (29) WoodMizer 4 head band resaw. We also sell on consignment. Contact: Bob Montgomery; Phone: (610) 621-2893; Email: ramco@comcast.net.

FOR SALE **Cable Skidders:** (1) 1970 JD 440A \$10,500. (2) TJ 240, P.O.R. (3) TJ 350, P.O.R. **Grapple Skidders:** (4) 1991 TJ 450B, Cummins engine, \$18,000. (5) 1996 JD 548G, \$45,000. (6) 1998 JD 648 GII, single function, rebld. trans, P.O.R. (7) 2000 JD 648GIII, dual function, P.O.R. **Crawlers:** (8) 1975 450C, 6-way blade, \$12,500. (9) 1977 D6D LGP, \$27,000. (10) 1987 D4H LGP, 6 way blade, enc cab, \$27,000. **Knuckleboom Loaders:** (11) Barko 160, on truck w/slasher, \$17,000. (12) 1987 Prentice 210C, 6 cyl JD slasher pkg, \$27,000. (13) 1987 XL 175 Husky, truck mounted, \$17,500. **Excavators:** (14) 1990 JD 590D, P.O.R. (15) 1990 JD 590D, hyd/thumb, P.O.R. (16) 1996 Yammer B6U mini excavator, \$13,750. **Wheel Loaders:** (17) JD 410 backhoe, cab, \$13,000. (18) 410B JD rubber tired 4x4, cab, P.O.R. **Trucks:** (19) 1978 GMC 2 ton w/hydr hoist, flatbed dump, \$4,500. **Delimbers:** (20) Siiro delimber/slasher, \$7,000. **Feller Bunchers & Shears:** (21) 775A Barko, P.O.R. (22) 1988 Cat 910, 17" shearhead, rebld trans, \$32,000. (23) 1978 Drott 40, JD engine, \$13,000. (24) 2004 643H JD, 2100 hrs. warranty, \$135,000. (25) 1984 411B Hydro-Ax, \$15,000. (26) 1987 411B Hydro-Ax, \$20,000. (27) 1994 511E Hydro-Ax 20" Koehring, \$57,000. (28) 1993 JD 590D w/18" roto saw, \$27,000. (29) 1976 JD 544B, \$17,000. (30) 1976 JD 544B, 20" shear, \$21,000. (31) 1993 Risely Black Magic w/Risley sawhead, \$65,000. **Miscellaneous:** (32) 1999 ASV posi-track skidsteer, rubber tracks, \$21,000. (33) 1979 731 Bobcat skidsteer, loader, \$6,700. (34) Cat V80D 8,000# forklift, \$6,500. (35) 60" Slasher w/power unit, \$14,500. (36) 60" Siiro slasher, \$8,500. (37) 60" Lemco slasher, \$8,000. (38) 20" Koehring sawhead to fit 643 JD, \$9,000. (39) 1995 546 Valmet forwarder, 6 wheel, P.O.R. (40) Gafner iron mule pre-hauler, \$12,000. Contact: Northern Timberline Equipment, Inc, 6000 County Rd 8, Littlefork, MN 56653; Phone: (218) 278-6203; Fax: (218) 278-6716; Email: ntel@frontiernet.net.

FOR SALE Wood Shaving Mill- produce poultry bedding litter with a Jackson Wood Shaving Mill. We do complete layouts. Contact: Jackson Lumber Harvester Co. Inc, 930 N State Rd 37, Mondovi, WI 54755, Phone:(715) 926-3816;Fax:(715) 926-4545; Web: www.jacksonlbrharvester.com.



Forest Products Wanted

WANTED (1) 12 or more cords of hardwood logs, 100” for firewood, poplar, ash, oak, delivered to Otter Tail County, MN. Cash paid upon delivery. Contact: John Lunde, 19905 270th Ave., Fergus Falls MN; Phone: (218) 826-6157, if no answer leave message, early mornings best.

WANTED (1) Early D-8 Caterpillar- (75, RD8, 2U) running or not. Also Early D-9S, running or not, or parts. Contact: Doug Berenston; Phone: (218) 744-3229; E- mail: Diablo@rangenet.com.

WANTED: Trees (or portions of trees) for a theater set replicating a forest scene. **Specs:** Species: Any deciduous including birch, elm, basswood, oak, aspen, ash, ironwood or maple. Branches desirable. Bole diameters: Can vary from 3" to 20". Height: No greater than 24' and no less than 8'. Volume: Unknown, but need to fill a 20' by 15' space for the set. Price: Negotiable. Material ideally delivered to the Guthrie Theatre in Minneapolis by early September. **Contact:** Craig Fernholz, Guthrie Theatre, 818 2nd St. South, Minneapolis, MN 55415. Phone: (612) 225-6408; FAX: (612) 225-6410; Email: craigf@guthrietheater.org

Equipment Wanted

WANTED M-24 Bell-saw mill, 3 hold block, should be in good shape. Contact: James Gust, Gust Sawmill; 30170 Co Rd. 8, Strathcona, MN 56759. Phone: (218) 528-4878.



Services and Miscellaneous

MISC. (1) Motivated young timber buyer to work for MN. hardwood export company. Will train the right person, salary negotiable. Contact: Ed Allen, Central Minnesota Hardwood Sales, 1402 Wilkinson Ct, St. Peter MN; Phone: (507) 931-5724;Fax: (507) 931-5740; E- mail: edwardwallen@msn.com.

MISC. (1) Custom drying dehumidification klin- 600BD Ft capacity; contact: Jim Mielke, Mielke's Mill & Crafts, 37885 Park Trail, Center City, MN 55012; Phone:(651) 583-2813; E-mail: jlmiel@ties2.net.

MISC. ANCHORSEAL end sealer for green logs and lumber, available in clear and colors; free sample available. Also LogSavers and FlichSavers – Plastic “s-irons” for logs and veneer fitches; can be sawn or sliced through without damaging equipment. Contact: U-C Coatings Corp., P.O. Box 1066M, Buffalo, NY 14215; Phone: (716) 833-9366;Fax: (716) 833-0120; E-mail: mnmkt@ucoatings.com; or visit our website at: www.uccoatings.com.

DNR Forestry Timber Auction Sales

Date	Auction Type	Sale Name	Location
Sep 6	Regular	Little Falls Area – Sealed Bid	Range Control Building
Sep 13	Regular	Bemidji Area – Sealed Bid	Bemidji Area DNR Forestry Office
Sep 13	Intermediate	Bemidji Area – Sealed Bid	Bemidji Area DNR Forestry Office
Sep 18	Intermediate	Park Rapids/Detroit Lakes Areas	Environmental Education Building
Sep 18	Regular	Park Rapids Area	Environmental Education Building
Sep 20	Regular	Little Falls Area	Onamia Field Station
Sep 20	Intermediate	Little Falls Area	Onamia Field Station
Oct 16	Regular	Rochester Area	Rushford Fire Hall
Dec 11	Regular	Blackduck Area	Blackduck Senior Center
Dec 11	Intermediate	Blackduck Area	Blackduck Senior Center
Mar 25	Regular	Rochester Area	Rushford Fire Hall
Mar 28	Regular	Lake City Area	DNR Area Forestry Office

Utilization & Marketing Staff: All staff other than Keith Jacobson are part-time on U&M.

Keith Jacobson, U&M Program Leader, St. Paul, 651-259-5270 Email: keith.jacobson@dnr.state.mn.us

Rick Dahlman, U&M Staff, St. Paul, 651-259-5257 Email: rick.dahlman@dnr.state.mn.us

Jeff Edmonds, Northwest Region U&M Staff, Bemidji, 218-755-2894 Email: jeff.edmonds@dnr.state.mn.us

Doug Tillma, Northeast Region U&M Staff, Grand Rapids, 218-999-7843 Email: doug.tillma@dnr.state.mn.us

Lynn Mizner, Northeast Region U&M Staff, Aitkin, 218-927-7511 Email: lynn.mizner@dnr.state.mn.us

Lance Sorensen, Southern Region U&M Staff, Lake City, 651-345-3216 Email: lance.sorensen@dnr.state.mn.us

Vacant, RC&D Forestry Coordinator,

**The
Market
Place**

The Market Place
DNR Forestry
500 Lafayette Rd
St. Paul, MN 55155-4044
Website: [http://
www.dnr.state.mn.us/
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