

Western Forester

November/December 2009

Oregon • Washington State • Inland Empire • Alaska Societies

Volume 54 • Number 6

The World of Wood: Worldwide Trends and Local Impacts

BY PHILL GUAY

What is the saying? It's the economy stupid! Well, it is. Over the past several years there is no doubt that the global downturn has been the primary force changing the wood products industry. These changes are easy to see and are predictable: Falling prices worldwide and massive closures of capacity both temporarily and permanently in virtually every wood products sector worldwide. The failure of the weaker players—and even some stronger players—for a variety of reasons, have found themselves too leveraged to survive a credit- and demand-constrained world.



However, underlying these massive and predictable changes are several trends that were already underway. As the wood products industry emerges, there is no doubt it will look similar in some ways and different in others.

This article looks at global trends to evaluate impacts in the west and throughout the country. It is a story of fast-moving positives and negatives with no clear answers, but clearly, global, not just local, trends are critical to the future of the U.S. industry.

A global commodity

Key to all of these changes is that wood, in its many forms and uses, is now a truly global commodity. Whether it is sourcing, manufacturing or selling products, wood products move freely



PHOTO COURTESY OF PHILL GUAY

Hardwood plywood assembly in a typical medium-sized mill in China.

around the world. No region is isolated from events in others.

A shift in demand, supply, currency or credit in any significant area affects that supply chain worldwide in some way every day. One can no longer understand pricing or customer expectations in terms of their own region; global events must be monitored.

Green: Core not a niche

Among the most important worldwide forces are the diversifying use of wood and the accelerating “greening” of demand. For many years green products, whether certified wood sources, selection of specie or choice of resin, has been a growing but specialized market. One that in many cases was difficult to justify financially.

This is no longer the case. As we emerge, the green approach will be essential to survival. What was a niche

just a few years ago is a commodity today.

For example, worldwide countries are implementing legal logging requirements. Over time these requirements will significantly alter the sources, flow and cost of wood worldwide. In the United States, changes will take place through the Lacey Act.

Lacey Act

The recently modified Lacey Act requires, on a phased-in basis, that any wood product be proven legally harvested before it can be imported into the United States. The act will present challenges, but manageable challenges, to wood sources overseas. In the short run, it may offer opportunities to U.S. landowners.

Although the Lacey Act does have some specific reporting requirements,

(CONTINUED ON PAGE 2)

The World of Wood: Worldwide Trends and Local Impacts

(CONTINUED FROM FRONT PAGE)

at its core is the need to prove due care in sourcing wood overseas. There is no certainty on how the courts will enforce or interpret due care until a series of precedents are established by enforcement agencies and private sector initiatives. For landowners located in the United States, providing proper documentation and tracking should add little incremental cost.

The same is not true globally. Since the act involves assuring that wood is

legally harvested and traded throughout the entire supply chain, the Lacey Act has numerous cost and compliance issues offshore. Some less developed and less monitored countries, as well as importers, will need to develop tracking mechanisms to satisfy the U.S. agencies and courts. This will take time and effort.

Some areas may be more highly scrutinized, such as those areas where legal logging is frequently questioned. Everyone will have an opinion as to where the offenders are. No matter where, compliance and maintaining a documented chain of custody will add cost, but perhaps least so in the USA.

Where is the opportunity? As the act is enforced, export opportunities may emerge as manufacturers offshore seek the safety of American wood. In addition, American manufacturers that now import may also seek the safety of local wood. Business lost to imported wood could be regained.

Relative to enforcement, it is likely that private sector action will have the largest and most rapid impact. Landowners and associations will need to be proactive in demanding everyone in the import supply chain prove legal wood. That will come by pressure on enforcement agencies including specific requests and legal action taken by individuals, companies and associations.

New economic values

Beyond the issue of legal logging, a new demand for wood will have significant impacts: the emerging use of wood and wood byproducts for energy production. One cannot read an industry publication worldwide today without some company or government announcing a new biomass plant utilizing wood. In many cases and countries, various operating and tax incentives make investing in these plants even more lucrative and add a sense of urgency to act. Increased wood demand created by these plants will have a significant effect on wood demand and prices in the region, which will reverberate well outside the area.

Today, while wood demand is low, the impact of these plants may be negligible; however, as worldwide demand improves, these alternate uses will impact pricing. This will impact the entire value chain. Eventually as demand increases, wood currently used in higher value uses will end up in biomass applications, thus driving up prices in seemingly unrelated areas. The increase may be small, but it will be there. Similarly, the worldwide use of living trees for carbon sequestering is becoming an economically viable option, whether it is by selling carbon tax credits or using standing timber as a tax offset for other operations. Not harvesting, for the first time, may yield positive cash flow. Every country and situation will be different, but as car-



Assisi
Software
FOREST
MANAGEMENT
SOFTWARE



PO Box 33815 • Portland, OR 97292 • 503.233.6417 • www.AssisiSoft.com



Western Forester

Society of American Foresters
4033 S.W. Canyon Rd. • Portland, OR 97221 • 503-224-8046 • FAX 503-226-2515
rasor@safnwo.org • michele@safnwo.org • www.forestry.org/wf

Editor: Lori Rasor • **Assistant:** Michele Docy

Western Forester is published bimonthly by the Oregon and Washington State Societies' Northwest Office

State Society Chairs

Oregon: Mark Buckbee, 781 Garden Grove Dr., Roseburg, OR 97470; 541-464-3202; Mark_Buckbee@blm.gov

Washington State: Doug St. John, CF, 365 118th Ave. SE, Bellevue, WA 98005; 425-452-5702; dougstjohn@greencrow.com

Inland Empire: Britton Pettit, PO Box 57, Valley, WA 99181; 509-937-4100; brittonp@dor.wa.gov

Alaska: Susanne Rodman, CF, PO Box 1331, Girdwood, AK 99587; 907-267-4902; rodmansu@muni.org

Northwest Council Members

District I: Chuck Lorenz, CF, 777 Hartman St. SE, Tumwater, WA 98501; 360-951-0117; c_4str@yahoo.com

District II: Clark Seely, 2790 Foxhaven Dr. SE, Salem, OR 97306; 503-999-3475; cleoregon@comcast.net

Please send change of address to:
Society of American Foresters
5400 Grosvenor Lane
Bethesda, MD 20814
301-897-8720

Anyone is at liberty to make fair use of the material in this publication. To reprint or make multiple reproductions, permission must be obtained from the editor. Proper notice of copyright and credit to the *Western Forester* must appear on all copies made. Permission is granted to quote from the *Western Forester* if the customary acknowledgement accompanies the quote.

Other than general editing, the articles appearing in this publication have not been peer reviewed for technical accuracy. The individual authors are primarily responsible for the content and opinions expressed herein.

Next Issue: Managing Forest Catastrophes

bon trading matures, there is no doubt that wood will have an improved economic value beyond being harvested. It is well worth watching local regulations to understand this issue as it relates to standing timber.

The bottom line is that with more uses for wood in the future, harvested or not, and with legal logging enforced, higher prices can be expected. That's good if you are a landowner. If you are a wood user, it will force you to seek wood worldwide for the best value. Just as important, you will need to continue investing in improved recovery and other lean activities to keep your costs competitive.

At the periphery of our industry as wood costs rise is the likelihood that we will begin to see investment in wood alternatives such as engineered veneer, coconut palm and oil palm, among others, as substitutes for some specific wood applications. This is undoubtedly a long-term trend, but is worth watching.

Offshore issues

As a global industry, how the offshore industry recovers will significantly affect U.S. participants.

The explosive growth of wood demand prior to 2007 resulted in a highly fragmented, opportunistic industry, particularly in China, southeast Asia, Africa and Russia. The industries there boomed with the emergence of numerous small, frequently family- or cooperative-owned companies. These small operations can survive in an environment of excess demand and lax regulatory/quality enforcement. The impact of the economic downturn has been most pronounced on these smaller companies because they have the least efficient operations and the least capital invested. In China, for example, it is widely estimated that 30-40 percent of panel mills have closed, but they account for less than 10 percent of operating capacity.

As the global wood products industry emerges, the survivors outside the U.S., and particularly in developing countries, will be bigger, more efficient, better capitalized and more competitive than they were prior to the downturn. Do not look for offshore competition to decline in these areas,

but to intensify with improved quality, flexibility and undoubtedly an interest in selling directly into the USA market. Keep an eye on your largest customers buying direct from offshore suppliers.

Finally, one of the most pronounced changes in the North American industry over the last decade has been the movement of end-product manufacturing, be it furniture, panels or other items offshore, particularly to China. While that trend has stabilized, it is well worth watching. The operations offshore, as the global economy recovers, will be bigger and more efficient. They will have expanding domestic and worldwide demand to feed. At the same time, one of the primary wood suppliers, Russia, has for several years initiated, rescinded and threatened significant tariffs on birch logs. Should that happen (2010/2011 is the most recent forecast), China will likely shift wood demand to southeast Asia, New Zealand and Africa, affecting supply and pricing worldwide. It may make China less competitive. Add that to a weakening U.S. dollar and there may be an opportunity for some companies

that have moved offshore to move back to the U.S. While maybe a long shot, it is worth monitoring. See a separate article in this issue for more depth on the issues and future of the Chinese wood products industry.

In summary

What does this all mean to U.S. companies? It means that wood, like all commodities, but perhaps more so, will become more expensive. To offset this or to take advantage of it—depending on where you are in the supply chain—means seeing your company as a global player and responding globally, not locally. When you do that, the complexities are more, but manageable, and the opportunities are well, global. ♦

Phill Guay is owner of Business Dynamics, a company that specializes in understanding and integrating global wood trends into business strategies to maximize the profitability of North American companies. Located in Portland, Ore., he can be reached at 503-740-1456 or PhillGuay@comcast.net.



ALLIGARE
AMERICA'S VM SPECIALISTS

Alligare KNOW-HOW helps make Forestland Management more Productive

<i>Alligare Product</i>	<i>Competitive Product</i>
Imazapyr 4SL	Arsenal® AC
MSM 60 DF	Escort®
Rotary 2 SL	Chopper®/Stalker®
SFM 75	Oust® XP
SFM Extra	Oust® Extra
Triclopyr 4 EC	Garlon® 4/Remedy®
Glyphosate 4	Roundup® Original

Arsenal, Chopper, and Stalker are registered trademarks of BASF Corporation. Escort and Oust are registered trademarks of E.I. du Pont de Nemours and Company. Glyphosate and Roundup are registered trademarks of Dow Agrosciences. Roundup is a registered trademark of Monsanto Company.

123 N. 6th Street Opelika, AL 36801 • 1-334-741-9393 • 1-334-741-9395 • 800.ALLIGARE • www.alligarellc.com

Canada: Forestry in Transition

BY ERIC SCHROFF

I have been privileged over the last couple of decades to attend Oregon State University and work in both Canada and the Pacific Northwest. I recently returned to Canada after working for the Washington State Department of Natural Resources as a senior manager. Not only has my vantage point changed with time and position, I have also had lots of driving time to think about how the forestry sectors of Canada and U.S. are very similar and vastly different. My comments, although informed by conversations and discussions with colleagues in Canada and around the world, reflect my point-of-view.

Forestry in Canada is in transition. Across the country, our systems of forest management are under stress from a disrupted economy, the perennial international trade dispute with the U.S., dismal returns on invested capital, evolving social norms, changing "landowner expectations," and major concerns with forest health, which may be linked to climate change.

Being in transition can be viewed as a wonderful opportunity. Substantive change in systems, approaches and policy often occurs only when things are in generally terrible shape. Although



lumber continues to flow, mills are closing and bankruptcies are becoming increasingly common. The forest industry is in shambles. Once upon a time, Canadian producers could confidently take the approach: "If times are tough we will just produce more 2x4s at a lower cost and work our way out of this." No more. Canada is no longer the dog that wags the tail of forest products production in this global economy. Revenue to the landowner (provincial governments for the most part) has diminished as commodity prices tumble and stumpage revenues dwindle. The softwood lumber dispute continues to plague Canadian producers, provincial governments and the Canadian federal government, adversely affecting economic viability of operations and constraining transactions between government and industry. A strong Canadian dollar, relative to U.S. currency, reduces export opportunities.

Return on invested capital in forest industry operations in Canada has been described as "terrible at worst and dismal at best." This is in spite of extensive mill upgrades and high conversion efficiencies in modernized facilities. Relatively high labor and delivered raw material costs that include the costs of "stumpage"—payment to the Crown for timber harvested—have thwarted many companies in their drive to be profitable and return fair shareholder value.

Although there has been progress in the last several years, Canada is a juris-

diction where significant elements of timber policy and law remain, arguably, root bound in economic and community development models from the settlement era. Policy and legislative barriers have limited market development, reduced opportunities to diversify product lines, and impeded moves to enter bio-energy markets. These barriers have stifled innovation and the amount of progress made in adapting policies and systems to today's world market conditions and societal expectations.

The economic realities facing communities, industry and government have become so bad that action is imperative. Across Canada there are indications of commitment by governments and industry to diversify the mix of tenures and support access to a much broader range of potential products from the forest. There is growing interest in bio-energy feedstock supply and in renewable energy production. In March 2009, the B.C. Government's Forestry Roundtable released a list of 29 recommendations supporting the panel's vision of "a vibrant, sustainable, globally competitive forest industry that provides enormous benefits for current and future generations and for strong communities." At the national level, the Socio-economic Sustainability Working Group of the Canadian Council of Forest Ministers is conducting research into what is needed to effectively "transform" the Canadian forestry sector for success in this new, global marketplace.

In Canada, there is a compelling need to build a globally competitive, market-based system for logs and forest products; commit to and demonstrate innovation and diversification—in policy as well as business; ensure prosperous rural economies with vested rights to both a voice in management decision-making and revenue from natural resource production; support and encourage First Nations (aboriginal peoples) business development and partnership in natural resource management; and increase social relevance and societal support for forest management activities, conservation and harvesting.

The challenges I have presented are just part of the broad spectrum of opportunity for change and improvement within the forest sector in Canada.



Barnes & Associates, Inc.

*Providing professional forestry and natural resource services to
Douglas County and Southern Oregon since 1992.*

**Our professional staff has a complete range of expertise in
natural resource management.**

SERVICES INCLUDE:

**Complete Forest Land Management
Design and Administration of Harvesting
Timber Cruising and Appraisals, Forest Inventories
GIS Mapping, Reforestation, Wildlife Surveys
Third Party Monitoring**

*Rick Barnes—Certified Forester by the
Society of American Foresters*

Phone: 541/673-1208

**3000 Stewart Parkway, Suite 204
Roseburg, OR 97471
www.barnesinc.com**



Along with the national and provincial level issues, there are challenges and opportunities that are relatively "local" in nature, which may have profound impact on regions and communities within this wonderful country. Whatever the scale, successfully achieving the goals outlined above individually, or in concert, will be part of the equation for meeting today's needs and preparing for the inevitability of tomorrow's surprises.

With strong ties to the practice of forestry and the family tree farm in Washington state, I have spent some time thinking about how the changes being made to policy, business models, marketing and natural resources management may affect the Pacific Northwest. In many ways, I think that foresters looking north may experience a strange sense of déjà vu! Communities and the forest industry in Canada are suffering much the way the PNW was affected during the spotted owl controversy and implementation of the Northwest Forest Plan. Although causative factors may vary, the effects are essentially the same. There is compelling need for both the PNW and Canadian jurisdictions to develop innovative, durable solutions and approaches to balancing conservation with economic opportunity to ensure vibrant communities persist across the landscape.

Canada and the U.S. enjoy a good working relationship, and although the softwood lumber issue remains of concern to all the parties, we will continue to see lumber and forest products flow across the border to the benefit of producers and consumers in both countries. Over the next few years, I expect effective stewardship, competitive commodity production, and expanded carbon management will be key areas of inquiry and implementation for foresters in North America.

We are members of a profession with the unprecedented opportunity to easily and quickly share information and experience with foresters from around the world. Taking the time to "look into our neighbor's back yard and visit over the fence" will pay off. There is much for Canadian foresters and policy-makers to learn from the experiences of the PNW over the last two decades. This is also a great time for foresters in the PNW to take a look

at the challenges facing your neighbor to the north and apply that learning to ensure the best possible future is realized in YOUR woods.

Current events and conditions in Canada's forest sector confirm that in today's world stability can be found only in the constancy of change. ♦

Eric Schroff is operations manager for

the Forest Management Branch, Energy Mines & Resources, Government of Yukon, in Whitehorse, where he is responsible for planning, research and silviculture programs and activities in the forests of Yukon. Currently, he is on assignment with the Yukon Government Executive Council Office. He can be reached at 867-456-6122 or eric.schroff@gov.yk.ca.

VOLUNTEERS WANTED

Have you ever wanted to get involved with a non-profit organization?

A non-profit that works with kids and plants trees both locally and internationally?



ReTree International (www.retreeintl.org)

is looking for some energetic volunteers to be part of our organization, founded in 1972 by Frank Lockyear, an Oregon nurseryman and tree planter. ReTree is in the business of planting trees and involving youth in these efforts.

Our Mission Statement

"ReTree International is a nonprofit organization that has three objectives: To plant trees on idle lands wherever they will grow throughout the world; to involve people, especially young people, in this effort, and at the same time, educate them regarding the importance of trees and forests to the well being of the planet and ourselves; and to support forestry research."

Not only is tree planting beneficial to our planet, but it's the type of project that is almost universally supported, particularly when children are involved. ReTree aims to involve children in all of our projects. Currently our board is simply too small to handle all the opportunities that come our way. We are actively engaged in many projects in the Pacific NW. We are also involved in successful and ongoing programs in Mexico and Tanzania.

Opportunities abound for projects all over the world. New board members could work on our existing projects or develop new ones by working with schools, Boy Scouts and Girl Scouts, and other youth groups. Funding is often available by applying for grants or working with groups that provide donations for this type of project.

Working as a volunteer doesn't come with a paycheck, but if you value our trees and forests and recognize their vital role in keeping our planet healthy, and you understand the importance of teaching the next generation of forest stewards these values, then being a part of an organization like ReTree can be a very rewarding experience. The amount of time needed depends on how much time you want to contribute to this effort and how much time your schedule allows.



ReTree
International

Visit our website or contact us at: retreeintl@hotmail.com

We look forward to hearing from those of you that want to help us plant trees.

Russian Forestry and Its Impact on the Pacific Northwest

BY DAVID STALLCOP

Even as recent as eight to ten years ago, the Russian timber industry was rather closed and obscure due to the high level of criminal activities that was prevalent throughout the industry, especially in terms of illegal logging. This negative history has resulted in the not-so-favorable image of the Russian timber industry globally.



There is no doubt that the Russian timber industry could hold a more significant position in the global marketplace. According to the Food and Agriculture Organization (FAO), the Russian Federation possesses 25 percent of the world's forest resources. The total area of forests in the Russian Federation is 1173.4 million ha (2,898.3 million acres) and the reserves of standing timber exceed 82 billion cubic meters (16.4 trillion board feet). What most people don't understand when they hear that Russia has 25 percent of the global timber supply is that Russia also only has 2.3 percent of the global timber production. All of the timberland in Russia is state owned and then leased to companies; there are specific management rules such as reforestation, road building requirements and community development responsibilities.

According to FAO 2004 figures, Table 1

shows forest areas of the key forest-possessing countries.

The major timber species that make up over 90 percent of all of

the forested area in Russia are larch, pine, spruce, oak, beech, birch and aspen.

The majority of sawmills in Russia are left over from the planned economy days where profitability was not the main goal. Of the more than 2,500 sawmills and wood processing facilities in Russia, only a few dozen or so now use modern sawmilling technology.

Currently, just 20 percent of the resources of Russia's forest sector are used, so there is room for development. However, the lack of infrastructure hinders the logistics of logging and the movement of lumber and finished products. It has only been 20 years since the cold war ended. After more than 50 years of neglect, it will take decades to develop that infrastructure.

In deep Siberia and the Far East where more than 50 percent of the standing timber exists, there is no infra-



PHOTO COURTESY OF DAVID STALLCOP

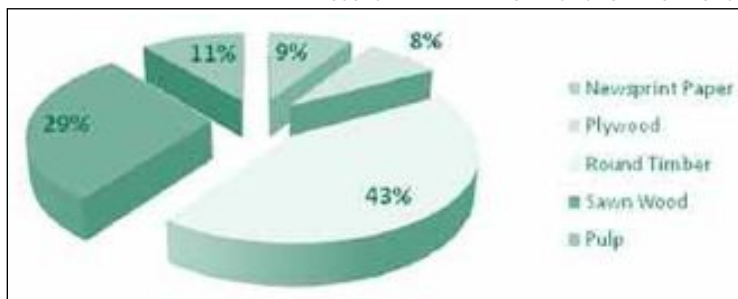
Two-hundred-year-old red pine logs are cut in mills around the Ust-Ilimsk area in Siberia.

structure at all and you will find around 224 million hectares (553 million acres) of completely unbroken and undeveloped forests. Only approximately 250 million hectares (617 million acres) of accessible forests are available for harvest and processing in Russia.

The majority of Russian logs and lumber exported into Europe, the Middle East, Japan, Korea and China

Table 2: 2005 Russian Timber Industry Export Volumes

SOURCE: THE FEDERAL SERVICE OF STATE STATISTICS



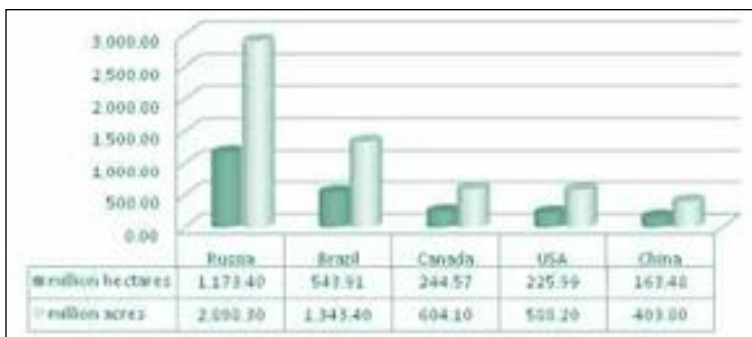
has been and still is shipped by either rail cars or break bulk vessels. As you can see from the statistics in Table 2, only a few years ago 43 percent of the Russian timber industry exports were in log form. The Russian government is working on changing this.

Russia, over the past few years, has been slowly increasing its log export duty as a way to build up its own domestic sawmills and wood products processing industry. Those who follow the log export duty situation believe that a higher duty alone won't make this happen. Time and money must be committed to develop the infrastructure and further increase investment in processing facilities.

An increase from the current 20 percent log export duty to a proposed

Table 1: Sizes of the Forest Areas of the Key Forest-possessing Countries in the World

SOURCE: FAO 2004



80 percent level was postponed in January of this year. In October, the duty came up for vote again, and it was again postponed until January 2011. It is likely to be delayed after this date as well.

The barrier to entry into the United States has always been and will continue to be the cost of transportation from Russia, primarily in the Far East and Siberia. This is where you will find the lumber products that are in demand in the U.S., such as red pine clears for door and window parts. The other issue that makes it difficult to bring lumber and wood products from Russia to the U.S. is the lack of an infrastructure system to safely bring containers from the main export ports into Siberia and the Far East. All lumber and wood products must be shipped by open rail cars to the ports and thus loaded there into containers, which adds additional freight costs.

For further development of the Russian forest products industry to occur, mainly in terms of lumber, OSB and plywood production capacity, a strong Russian domestic market must be created. One hundred years ago most homes in Russia were timber framed and many are still standing. During the days of communism over the past 50-60 years, people got used to thinking of wood construction as less reliable and strong compared to concrete and metal. A push toward domestic wood frame construction is really what is needed to encourage more infrastructure development and log processing facilities.

Shipping logs, cants and unprocessed lumber to Finland, China, Korea and Japan is not the answer to the future development of the Russian timber industry. Of course, the country does not currently have an established building code system for wood frame construction, so in order to promote wood frame housing, research must be done and associations either nonprofit or for profit must be encouraged. Government control of standards will only be held up in bureaucracy. This could take between 20 and 30 years to occur.

Many experts feel that for Russia to further develop into a certified timber managing and processing country respected for its management practices



PHOTO COURTESY OF DAVID STALLCOP

A typical logging road through a red pine forest around the Ust-Ilimsk area in Siberia.

on a global scale, it must join both the forest and timber industries with common goals. Currently, the timber side acts independently from the forest side, mainly because the central government in charge of the timber lease agreements is in Moscow, whereas the sawmills are out in the forests. This leads to the government not understanding the needs of the sawmills.

The largest impact that Russia will have on the U.S. Pacific Northwest is in export markets such as Japan and China. Logistics and freight costs will impede a large-scale entry into the U.S.

lumber market. Plywood may be a different story, however. If the U.S. market rebounds, then Russian birch plywood will easily be able to be shipped out of Russia's Western port of St. Petersburg into the U.S. East Coast as we saw happen just a few years ago during the peak of our U.S. housing boom. ♦

David Stallcop is Import/Export manager for Vanport International, Inc., located in Boring, Ore. He can be reached at 503-663-4466 or david.stallcop@vanport-intl.com.



Forest Landowners & Christmas Tree Growers

www.forestseedlingnetwork.com



Buy / Sell Seedlings

Use Our NEW Map Search



Locate Vendors for Forestland Management Products & Services

OREGON • WASHINGTON • IDAHO • MONTANA • CALIFORNIA

bob@forestseedlingnetwork.com

503-769-9806

Forest Seedling Network
1740 Shaff Rd. #306
Stayton, OR 97383

China's Wood Products Industry: A Current Overview

BY PHILL GUAY

Providing an overview of the wood products industry in China is an imprecise effort. It is difficult to relate to how large and diverse China is as a nation. Equally, it is difficult to appreciate the size, diversity and fragmentation of the Chinese wood products industry. In fact, no doubt every story and statistic you may hear about China and its wood products industry is true—somewhere, somehow. The wood products industry in China, as we know it, began from a modest domestic base in the 1990s to today where it is the world's largest importer of wood and the world's largest manufacturer and exporter of finished wood products from panels to furniture.

Raw materials

China drives global wood pricing. Because the Chinese wood products industry has depended on imports for so long, it moves readily between regions and specie, finding the best values globally. China's source of domestic raw materials ranges from tropics in the south to species like poplar and fir to the north. China has restrictive limits on harvesting natural forests and they are enforced. In fact, resource growth is primarily from plantations. So as the world's largest consumer of wood, China is very dependent on imports. Its neighbor to the north, Russia, has among the world's largest standing forests. In addition, to the south are immense tropical forests as well as nearby New Zealand with its radiata pine forests. At the same time, this nation so in need of natural resources scours the world for wood well beyond its neighbors.

Increasingly, China imports from the African and South American continents from both logging concessions and the

spot market. Even North America gets into the act with softwood log exports from the U.S. to China up 31 percent and Canada up 45 percent for the first half of 2009 compared to first half of 2008. At the same time, import of Russian softwood fell 18 percent over the same period. New Zealand softwood log importers grew 127 percent.

Russia in particular plays a significant and unpredictable role. Like many countries, Russia prefers value-added manufacturing to raw log exports, and over the years has proposed extreme tariffs on raw log exports. The threat of 80 percent tar-

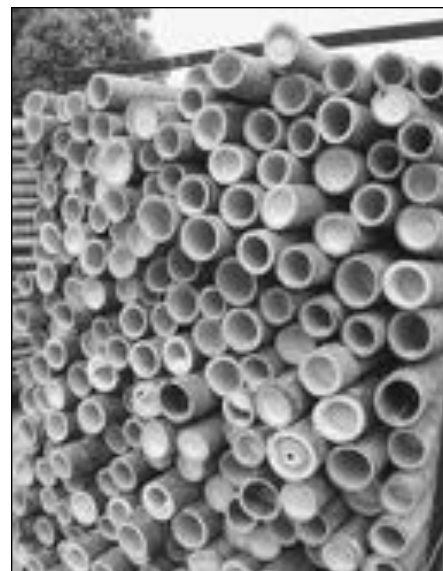


PHOTO COURTESY OF PHILL GUAY

Raw bamboo, one of China's native species.



PHOTO COURTESY OF PHILL GUAY

Low-cost commuting at a small mill in rural China.

iffs, now delayed until 2011, will dramatically affect where China sources wood and will have an equally dramatic effect on pricing elsewhere. The absence, or high cost, of Russian wood will most likely not cripple the Chinese wood products industry, but alter the sources of raw materials and hence affect pricing globally.

Manufacturing

Chinese manufacturing is equally diverse in terms of efficiency, products manufactured and end-sale markets. There is a saying that China pays the most for the world's wood, but then produces the world's most economical

wood products.

First, it's a matter of scale. The Chinese industry is enormous and has developed around many concentrated manufacturing centers. For example, the south focuses on end products like furniture, while the farther north concentrates on panel manufacturing. Each of these numerous locations has an entire production chain: plantations, import log markets, high value wood users, residual wood users, pulp plants and an equipment support industry all connected by an excellent transportation system.

In fact, in some manufacturing centers you can drive for miles and never

WOODLAND FORESTRY CONSULTANTS

Don Theoe, CF/FCA #17, ACF
Chief Forester

P.O. Box 99788 (253) 581-3022
Lakewood, WA 98496-0788 Fax (253) 581-3023
E-mail: wfc.don@comcast.net

feel like you have left a factory. Logs in at one end, then veneer mills, adjacent to plywood mills, adjacent to a medium-density fiberboard or particle board mill with a furniture factory, pulp mill and a machinery plant thrown in somewhere—an efficient manufacturing model. Raw materials are in at one end, and a diversity of products are produced with very little waste out the other end.

However, historically many of the manufacturing plants in the Chinese wood products industry were very small. They were formed by families or cooperatives to take advantage of the boom in global demand, but were relatively inefficient with little capital investment. The majority of these small, opportunistic mills have closed over the last two years. It is the larger, more quality-focused mills that are surviving. There is no doubt that as the global wood products industry emerges from the current downturn, the Chinese industry will be more efficient and of higher quality.

Beyond efficiency of scale is the advantage of low-cost labor. In China, more so than the U.S., wood is an even larger percent of total production costs. The advantage of low-cost labor is how it is used. Labor is used to improve recovery. Especially in high-valued engineered products, a piece of wood that in the U.S. would be used in lower value applications is stitched together in China so that every piece of wood is used in its highest value application. Nothing is wasted. Just tear apart a piece of Chinese plywood or an engineered wood doorframe and you will immediately see the difference. It works for consumers worldwide and generates great recovery and efficiency for the Chinese industry.

Investment and sales

In addition to its internal efficiencies, the Chinese wood products industry has capital investment advantages. Forest products are what are recognized by the central government as an “encouraged” investment category, meaning there are internal tax benefits for domestic sales and even greater tax benefits for exporting. Investors are also encouraged by various incentives. Most of the incentives are not too different from those available in other

countries, but rarely are they applied to the wood products industry.

In terms of sales, the Chinese wood products industry has many global options, which provides the ability to move among markets for the best prices. This also allows the industry to remain more stable by shifting sales as varying global markets are weaker and stronger. In fact, China is the largest supplier of finished wood products not just to the U.S., but in Japan and the European Union as well.

The future

As the worldwide wood products

industry emerges from the current downturn, the Chinese industry, like its counterparts worldwide, will emerge differently. However, it is likely that the exponential growth of the Chinese industry, taking up market share in every developed region of the world, will slow. The industry will emerge fundamentally different in that the downturn will have eliminated the smaller, poorly capitalized companies and replace those with a more integrated industry. Sourcing wood globally and selling manufactured products globally from fewer, larger companies will occur.

China will remain both a threat and an opportunity for North American companies. Threats in that it will be the primary driver of wood prices worldwide and as it moves among sourcing regions prices will shift accordingly. Similarly, it will undoubtedly

remain the world's largest end product manufacturer with significant cost advantages. China is an opportunity in that the U.S. and North American timber industry should be a beneficiary of its demand for raw materials. In addition, manufacturers can continue to balance manufacturing between global regions and still take advantage of their knowledge of U.S. consumer expectations and domestic sales organizations.

In the end, while China will be a continuing threat to the North American wood products industry, it most definitely can be an opportunity.



PHOTO COURTESY OF PHILL GUAY

There is no waste at this very small mill in China—labor is used to improve recovery.

Taking advantage of that opportunity depends on where your company fits in the supply chain and your willingness to leverage your strengths globally. ♦

Phill Guay is owner of Business Dynamics, a company that specializes in understanding and integrating global wood trends into business strategies to maximize the profitability of North American companies. Located in Portland, Ore., he can be reached at 503-740-1456 or PhillGuay@comcast.net.



Northwest Forestry Services

- Professional Forest Management
- Timber Inventories and Cruising
- Appraisals □ Mapping and GIS

(503) 684-8168
1-800-783-6818

11825 SW Greenburg Road 2A, Tigard, OR 97223
www.nwforestryservices.com

Nordic Europe's Focus on Biomass

BY ERIC HANSEN AND
CHRIS KNOWLES

The change in administration in Washington has significantly shifted the political winds around energy and climate change policy in the United States. Although the U.S. chose not to participate in the Kyoto Protocol, we will be involved in the new negotiations to take place in Copenhagen this December 7-18. Regardless of your personal view around global warming and the participation of the U.S. in the Copenhagen negotiations, the reality is that the U.S. is behind much of the rest of the developed world when it comes to developing and implementing a climate change strategy. The European Union (EU) has developed an aggressive strategy to reduce greenhouse emissions and a significant part of this strategy is wood biomass.

We recently led a group of 10 Oregon State University students on a study tour of Nordic Europe where our focus was on energy and natural resources management. We met with companies, toured facilities and forests, and gained considerable insight into both the energy culture and technology in Finland and Sweden. The EU's 20-20-20 princi-

ple was a topic of discussion at nearly every site visit. This principle suggests that member countries should reduce greenhouse gas emissions by 20 percent from 1990 levels, increase renewables by 20 percent and reduce energy consumption by 20 percent by the year 2020. Energy companies in the region look at energy production with three issues in mind: Kyoto commitments, maintaining competitiveness, and security of supply (referring to a huge proportion of Europe's energy coming from Russia). Taxes on fossil fuels play an important role in making biomass energy feasible—gasoline was approximately \$9/gallon while we were there. Also, Sweden has a carbon tax that has been part of their policy for many years.

In Sweden, electricity produced from wood biomass and other renewable sources is given green certificates. As described by the Swedish Ministry of Sustainable Development, suppliers of electricity have an annual quota of

certificates they must hold relative to their sale and use of electricity. In this way, companies producing renewable electricity earn additional money by



PHOTO COURTESY OF CHRIS KNOWLES

Photo 1. Roadside fuel wood in Finland.



PHOTO COURTESY OF SETH CADELL

Photo 2. Cut-to-length harvester.

INTERNATIONAL FORESTRY CONSULTANTS, INC.

Professional Forestry Services

**Forest Asset Managers
GIS and Certification Services**

Throughout the Pacific Northwest

(425) 820-3420



INFO@INFOrestry.com

**Tom Hanson
Dennis Dart**

MUSSELMAN & ASSOC., INC.

Consulting Foresters

7150 S.W. Hampton St., Suite 228
Portland, OR 97223-8378
503-684-5727 • www.forestvalue.com

*Experts in Forest Valuation
and Investment Analysis*

selling green electricity certificates.

Kyoto commitments, the goals of the 20-20-20 principle and the implementation of related policies have had a dramatic impact on forest-sector practices. Even the casual observer can see the difference. Driving around Finland a decade ago one would never have seen piles of fuelwood along the roads. Now this sight is commonplace (Photo 1). One reason the use of bio-

mass is feasible in these countries is the common use of district heating systems. In district heating, a central boiler provides heat for many or most buildings in a community. In larger cities this is done in a system of combined heat and power where electricity is produced and the remaining heat is used for buildings.

Stora Enso Bioenergi AB provided us with a superb example of the entire value chain of biofuel. We spent a day following biofuel from harvest to Stora Enso's Fors cartonboard mill. The series of photos cover the basic steps in the process and are explained here.

A. Cut-to-length harvesting (Photo 2) occurs as has been the norm for many years in these countries. Earlier, limbs were placed in front of the tires of the harvester to protect the soil. Today, most of the limbs are piled for later forwarding to the roadside. Limbs are still used to protect the soil on sensitive sites.

B. Slash is forwarded to the roadside where it sits for a season to dry (Photo 3). The piles are covered with a

(CONTINUED ON NEXT PAGE)



PHOTO COURTESY OF SETH CADELL

Photo 3. Forwarding of logging slash/fuelwood.

Jackson and Prochnau, Inc

Since 1954

*Feasibility Studies & Investment Analysis World Wide,
Inventory, Appraisals, Engineering, Management, Log Marketing*

www.jacksonandprochnau.com

Steve@jacksonandprochnau.com

Albany OR Tel: 541-926-3320

Olympia WA Tel: 360-352-9680

FOREST INFORMATION AT YOUR FINGERTIPS

The Oregon Forest Resources Institute is your source for information on Oregon's forests. Visit our Web site and explore OFRI's new online library where you can download nearly all our publications and order copies by mail.

www.oregonforests.org

**OREGON FOREST
RESOURCES INSTITUTE**

special paper to shed most of the rain/snow. Pulling stumps is also becoming a common practice. These are crushed and used as fuel. A number of different styles of chippers are employed. We observed two types (Photos 4 and 5). Also possible is chipping straight from the forwarder. Sweden is especially advanced with district heating for cities as well as small towns. This allows delivery to any number of nearby boilers, a critical variable since the maximum feasible hauling distance for chips is approximately 100 km (60 miles).

C. Photo 6 shows the transfer of chip bins between trucks. Highly efficient logistics is clearly an important element of biomass utilization in Sweden.

D. At the Stora Enso Fors carton-board mill, forest biomass (Photo 7) is mixed with a variety of other wood fuels, including pellets. The mill operates a number of different boilers producing “green” electricity that it sells. In total, the mill uses 98 percent biomass for its heat and power and produces about 40 percent of its overall electricity needs.

In western Finland we visited a small-scale district heating plant. This operation was recently installed and provides heat for the 10 largest public buildings in a small town. The Finnish government provides substantial initial investment subsidies for these types of operations, approximately 25 percent. These small-scale district



PHOTO COURTESY OF SETH CADELL

Photo 4. Truck-mounted chipper with interchangeable chip bin.



PHOTO COURTESY OF CHRIS KNOWLES

Photo 5. Truck-mounted chipper with piggy back and trailer bins.

heating plants are distributed across the countryside in Finland and Sweden, making the distribution of

wood biomass possible. There are still many challenges with small-scale production of heat using wood biomass.

Uniformity of chip supply in terms of size and moisture content is a major concern for small-scale boiler operators. Photo 8 shows the mix of wood materials received by a chicken farmer in western Finland—materials ranged from planer shavings to chipped slash. Currently, most small-scale operators purchase chips on a weight basis. This presents problems because the heat value of the chips varies drastically from one load to the next. Discussions are underway to develop a national standard for purchasing chips on a



PHOTO COURTESY OF SETH CADELL

Photo 6. Exchange of chip bins between truck and chipper truck.

ADVERTISE!

Call 503-224-8046 for
advertising rates & deadlines
or email: rasor@safnwo.org.





PHOTO COURTESY OF SCOTT MANISS

Photo 7. Chipped slash pile at cartonboard mill.

fuel value basis.

According to Wood Resources International, Sweden used over 20 percent of world production of wood pellets last year, producing 1.6 million tons and importing an additional 300 thousand tons. Swedish government statistics show that district heating makes up about 40 percent of the total heating market in the country and 62 percent of this is now from biomass. Renewables, including biomass, make-up approximately 28 percent of the total energy consumed in Sweden. This is over four times that of the U.S. at approximately six percent.

California is taking significant steps in its policies, similar to those in Europe. A recent Governor order set in place a rule for the Air Resources



PHOTO COURTESY OF ERIC ZUBER

Photo 8. Variety of wood residues used by small-scale boiler in Finland.

Board to move the state to where one-third of its electricity comes from

renewable sources by 2020. The state also recently instituted a carbon tax for polluting industries.

Although there are many differences between Scandinavia and the Pacific Northwest (distance to market likely being the most significant) there are clear lessons to be learned from the systems that Finland and Sweden have in place for the utilization of woody biomass. ♦

Eric Hansen is professor and Chris Knowles is assistant professor, both for Forest Products Marketing, Department of Wood Science and Engineering, Oregon State University in Corvallis. Eric can be reached at 541-737-4240 or erichansen2@oregonstate.edu. Chris can be reached at 541-737-1438 or chris.knowles@oregonstate.edu.

Mason Bruce & Girard

Natural Resource Consultants Since 1921



Forest Resource Assessment, Planning & Management

Biological, Wetland & Water Resource Studies

Environmental Compliance & Permitting

Spatial Analysis & Database Development

MB&G

707 SW Washington St., Suite 1300
Portland, OR 97205 (503) 224-3445
www.masonbruce.com

Forestry in Japan has similarities to PNW

BY ROBERT L. DEAL

Japan is truly a land of contrasts. This relatively small island country boasts one of the world's biggest economies and includes densely populated urban areas like Tokyo and Osaka with high-rise buildings and ultra-modern bullet trains. Japan also has farmlands and large upland forests and national parks. It has ancient traditions of forest management, but struggles to reconcile conflicts between modern urban and rural lifestyles. Different land use pressures in Japan are similar to urban/rural conflicts in the United States, and forestry issues in Japan have similarities with forest management here in the Pacific Northwest.



Forests cover nearly two-thirds of the total land area of Japan with approximately 60 million acres of forestland, 45 percent of which is in plantations. Forestlands dominate on steep hillsides and mountain slopes, and include both conifer plantations and natural mix-

tures of broadleaf and conifer species. Plantations are managed on more than 25 million acres in Japan and were established on a commercial scale following the World War II reconstruction. The most important plantation species are Japanese cedar or sugi (*Cryptomeria japonica*), Japanese cypress or hinoki (*Chamaecyparis obtusa*), Japanese larch (*Larix leptolepis*) and Japanese pine. Hinoki is used as high-quality timber for palaces, temples, shrines and baths. Sugi is the national tree of Japan and is favored for all types of construction as well as interior paneling.

Approximately 60 percent of forestland is privately owned, 30 percent owned and managed by the government, and the remainder owned by cooperatives, shrines or temples. Much of the private land includes family forest landowners, a similar pattern as here in the United States. Some prefectures (similar to our counties) have large areas of government-owned forests and include more rural areas such as the Hokkaido prefecture. Other prefectures, including Aomori, Iwate and Akita, produce relatively large amounts of forest products.

A significant portion of these forest



PHOTO COURTESY OF ROBERT L. DEAL

A forest owner and manager near Mt. Fuji, Japan, discuss how to manage hinoki and sugi plantations to produce high-quality lumber.

plantations are mature or close to maturity: Almost 60 percent of the total plantation land area is more than 30 years old. Forest management in Japan is intensive with several thinning entries and other stand-tending practices needed to produce high-quality lumber. Forest plantation expenses for site preparation, planting, weeding, pruning and thinning have more than doubled in the past 15 years, while stumpage prices for typical plantation species such as sugi have declined by almost half. This makes Japanese forestry difficult to be profitable.

The economic challenges for forestry has been further magnified with the global economic downturn as recent harvests have significantly declined, causing problems throughout the Japanese wood products industry. In 2000, round wood production totaled approximately 640 million cubic feet, down from about 1.7 billion cubic feet in 1965. In 2001, Japan's nearly 12,000 sawmills processed 17 million tons of logs, yet domestic production met less than half of Japan's total demand for lumber and pulp wood.

During the 1980s and 1990s, Japan became more reliant on imported wood to supply its domestic demand.



PHOTO COURTESY OF ROBERT L. DEAL

Japanese forest researchers walk through a dense hinoki forest plantation in Japan.

In 2000, Japan imported \$13.3 billion in forest products, second only to the United States. Currently, Japan is one of the world's largest importers of softwood lumber.

The United States is the sixth largest exporter of wood products to Japan; the top three exporters are China, Malaysia and Canada, respectively. The Pacific Northwest (Washington, Oregon and Alaska) includes the three largest exporting states from the U.S. to Japan. However, there has been a 15-year decline in U.S. wood export to Japan, which includes a dramatic decline in exports of logs and lumber from the Pacific Northwest. In 1989, the Puget Sound region exported 2.4 billion board feet of logs and 1.1 billion board feet of softwood lumber to Japan. In 2008, these export totals were only 460 million board feet of logs and 97 million board feet of lumber. Most of this lumber is used in the residential market, with traditional Japanese post and beam construction accounting for three-fourths of the Japanese softwood lumber market. Douglas-fir has been a preferred lumber species; however, European products such as whitewood and redwood glulam have slowly eroded its market share.

Japan puts a great deal of emphasis on the protection of forest functions, and the important role of forests in maintaining critical ecosystem services is commonly accepted by the public. Japan is a mountainous country with heavy rainfall and seasonal flooding. Forests provide important functions to reduce landslides, prevent erosion, and provide high-quality water for drinking and irrigation. Rice has been the staple crop of Japan for hundreds of years, and rice paddies often occur in hillside terraces directly below forest stands. The Japanese are also quite concerned with air and water pollution. Forests and parks are widely used for recreation. However, in contrast to the USA, timber harvesting is allowed in most national parks. Japan also has serious problems with invasive species and forest insects and diseases. Invasive species are a global problem and Japan's international trade has created many opportunities for new pests to become established. Currently, one of the major concerns is an introduced beetle from North

America that has killed large areas of native Japanese pine.

In summary, Japan is a modern industrialized country with an economy closely associated with global international trade. Forestry in Japan shares many of the same opportunities and challenges that we have here in the Pacific Northwest. Forestlands include both private and publicly owned forests with many family forest landowners who have highly varied management objectives. Plantations tend

to be native species and forests are well managed with the production of high-quality wood products. Forests in Japan are recognized for the broad suite of goods and services that they provide to the public. The wood products industry, however, is increasingly challenged by international markets. Japan recognizes the value of its forests, but is struggling to reconcile some of the competing demands for the goods and services that come from these forestlands. ♦



PHOTO COURTESY OF ROBERT L. DEAL

A view through a small forest opening of a 40-year-old sugi plantation on Shikoku Island, Japan.

Robert L. Deal is research forester and Science Team leader, Ecosystem Services, USDA Forest Service, PNW Research Station, Portland, Ore. He spent six weeks in Hokkaido this past summer as part of an Organization for Economic Cooperation and Development fellowship where he compared and contrasted mixed hardwood-conifer forests in northern Japan with southeast Alaska, and assessed ecosystem services in Japan. He can be reached at 503-808-2015 or rdeal@fs.fed.us.



HELENA[®]

CHEMICAL COMPANY

- Site Preparation Herbicides
- Conifer Release Herbicides

PLEASE CONTACT:

Bruce Kelsas 503-931-4602 <i>Oregon</i>	George Severson 541-840-6990 <i>S. Oregon/N. California</i>
Wes Wasson 253-279-5293 <i>Washington</i>	

Council Meeting Update: From Policy to Dues

BY CLARK SEELY

Under the leadership of President Bernie Hubbard, the SAF Council held their fall 2009 meeting on September 30 at the 2009 SAF National Convention, Orlando, Florida. All Council members and officers were present.

Highlights of the September meeting are provided below.

With the down economy, the financial situation of the Society remains challenging. Revenues from advertising and membership are both down compared to recent years, yet the convention and other meetings are breaking even. On the bright side, investments have rebounded somewhat from the 2008 declines. The national office staff have been working very diligently to cut costs wherever they can including outsourcing



of some of the financial management work, eliminating the receptionist position, reassigning duties, eliminating the cleaning service for the national office (staff is picking up this task), phone system transitioning to a less expensive service, and delaying office building capital investments. In addition, the financial system changes that have been evolving over the past several months are coming together well. It is anticipated that the 2010 budget will have to be tight to align with expected revenues.

The new SAF national website is up and running and a welcome improvement from the old site. Some tweaking is still occurring, particularly based on member feedback. The new membership data system migration is coming along as well, which will provide more stable and interactive membership data management and reporting, and also allow integration with the financial system, other office applications, and be functional from the internet. National staff encourages members

and local leaders to call anytime they have questions or needs about the new website or the membership data system.

In the policy arena, Council considered draft charters for two important focus areas—Biomass for Energy and Competitiveness of the U.S. Forest Sector. With understandable concerns about current costs, both concepts were approved to move forward in conceptual design with final approval planned for the December Council meeting contingent upon budget deliberations. Also at the December meeting, Council will consider draft position statement revisions on the subjects of forest roads, state credentialing, loss of forestland and woody biomass.

Much of the HSD meeting discussion and Council's deliberations revolved around membership and the cost of membership to early career members. Based on a recommendation by HSD, Council will consider modification to the dues structure for the first five years of membership to alleviate cost load on early career members. In addition, at the December meeting, Council will discuss membership dues amounts in the context of our overall revenue picture. It has been nine years since the last national dues increase, and the mix of revenue sources have changed over that time. It is important to consider these changes and membership needs in relation to our cost of doing business, and Council will consider all of those factors in the December meeting deliberations.

As always, if you have any questions or concerns relating to national SAF operations or governance, please contact me or District 1 Council Representative Chuck Lorenz at any time. We look forward to serving you. ♦

District 2 Council Representative Clark Seely can be reached at 503-999-3475 or cseely@odf.state.or.us. District 1 Council Representative Chuck Lorenz can be reached at 360-357-9088 or c_4str@yahoo.com.

Beavers Rule in Gator Country



PHOTO COURTESY OF JOE SMITH

The OSU Student Chapter won this year's Quiz Bowl challenge at the Orlando, Florida, National Convention. Left-to-right is Brad Hamel (Forest Management), Liz Bly (Forest Management), Jim Crawford (Forest Engineering) and Reed Youngbar (Forest Management). The group was expertly coached by Brian Wing (graduate student in Forest Engineering) and advised by John Bailey, associate professor of Silviculture and Fire Management.

Chapters Honor New Fellows and Golden Members

Marvin Rowley was congratulated for being named Fellow at the September 17 meeting of the Marys Peak Chapter. He gave a brief talk after receiving the award and advised younger foresters to: "Use your feet. You can read a book, use a computer, but what you really need to do is get on the ground."



PHOTO COURTESY OF NICOLE YOUNGER



PHOTO COURTESY OF CHUCK LORENZ

Portland Goldens

The Portland Chapter celebrated new Golden members at their September meeting. From top to bottom, Treasurer Tom Ortman awards certificates to Kent Mays, Dick Buscher and Toby Atterbury.



PHOTOS COURTESY OF ROGER LORD

(photo above) The Southwest Washington Chapter honored their 50-year golden members and new golden member Bill Kamin at a luncheon on August 27. Left to right are Chris Lunde (chapter chair-elect), Morrie Boles, Boyd Wilson, Alec Goedhard, Mike Jackson, Guy Lusignan, Bill Truax, Bill Kamin and Bob Tanner.

(photo to right) Bob Deal (left) receives his Fellow award from Portland Chapter Chair Roger Lord (right) as Jim Rombach looks on during the chapter's September 21 meeting.



PHOTO COURTESY OF MICHAEL TAYLOR

Oregon Chapter Nabs National Award

The Marys Peak Chapter of OSAF received the HSD National Recognition Award at the chapter level for its Community Leaders Tours. OSAF Chair Mark Buckbee (right) received the award from 2009 HSD Chair Gary Vander Wyst at the National Convention. These tours were held in 2005, 2007 and 2008 respectively in Lincoln, Benton and Linn counties. Each of these "by invitation" tours drew 60-75 elected officials, local government administrators, school administrators, news reporters and other community leaders. The purpose of the tours were to inform these leaders about the importance of the forestry sector to their communities, to connect community leaders and forest managers, and to generate positive understanding and press about the future of forestry in their communities.



PHOTO COURTESY OF CHRISTOPHER WHITED

PNW FORESTRY LEADERSHIP CONFERENCE

January 29-30, 2010 – Pack Forest Conference Center – Eatonville, WA
January 28: Optional Field Workshop – Pack Forest

All SAF members from Washington State, Oregon and Inland Empire are invited to participate in the Leadership Conference. The program will allow participants to: discover practical leadership principles, learn our role in national/regional forest policy, strategically plan fundraising efforts, address membership decline, gain insight to conduct successful meetings, negotiate with elected and business leaders, and much more. New this year is an optional field workshop into historic Pack Forest.

FRIDAY JANUARY 29, 2010 (8:30AM - 7:45PM)

- ▶ Leadership to empower others – **Eric Anderson**, City Manager, Tacoma
- ▶ Directing and impacting forest policy – **Erica Rhoad**, SAF National Policy Director
- ▶ Strategies for higher level fund raising – **Thomas Mentele**, Director of Development, UW College of the Environment
- ▶ Applied fundraising – **Mike Mosman**, Senior VP, Port Blakely Tree Farm
- ▶ Lunch (noon)
- ▶ Membership services for new and retaining members – **Kimberly Scott**, Director of Membership Services, WA Assn of CPAs
- ▶ Membership Engagement Roundtable – **SAF Chapter Members**
- ▶ Working with the media – **Mike Gowrylow**, Communications Director, Washington Department of Revenue
- ▶ State Executive Committee Meetings (4:20 pm)
- ▶ Dinner (5:30 pm)
- ▶ Leadership for the 21st Century – **Dr. Glenn Worthington**, Associate Dean, School of Business & Professional Studies, Brandman University (6:45 pm)
- ▶ Social (7:45–10:00 pm)

SATURDAY JANUARY 30 (8:00AM - 1:00PM)

- ▶ Keys to successful field days – **Andy Perleberg & Jim Freed**, WSU Extension Educators
- ▶ Planning successful meetings and recognition programs – **Stephen Pilkerton**, OSU Forest Engineering & **Don Hanley**, WSU Extension Educator (retired)
- ▶ How to get what you want from business and elected leaders – **Elly Walkowiak**, Economic Development Manager, City of Tacoma
- ▶ SAF NW Office—using it to grow – **Lori Rasor**, Manager/Editor, SAF Northwest Office
- ▶ Closing remarks – **Doug St. John & John Walkowiak**, WSSAF; **Mark Buckbee & Tim Keith**, OSAF; and **Britton Pettit & Terrie Jain**, IESAF
- ▶ Lunch (noon) and adjourn (1:00 pm)

OPTIONAL – Pre Conference Field Workshop into UW's Pack Forest

Thursday, January 28, 2010 — 9:00 am -4:00 pm

(Includes lunch and dinner on Jan. 28 and breakfast on Jan. 29)

Introduction and History of UW's Pack Forest – **Greg Ettl, Duane Emmons** and **Tom Touse**, UW Center for Sustainable Forestry. Field stops to learn and discuss: RMZ buffer/harvest demonstration areas; reconstructed wetland project; variable retention harvest areas; use of bio-solids; browse/weeding performance trials; FSC guided successional alder harvesting; and Trail of the Giants—old-growth ecosystem services.

LODGING

The UW Pack Forest has on-site apartments, dorm houses and cabins. Single occupancy rooms are \$55/night and double occupancy rooms \$44/night. Rooms will be assigned on a first-paid basis. If you do not select a cabin mate, one will be assigned to you.

REGISTRATION

Return registration form and check payable to **Washington State SAF** to: PNW Leadership Conference, Northwest SAF Office, 4033 SW Canyon Rd., Portland, OR 97221. Visa and MasterCard accepted. Questions? Contact SAF NW Office at 503-224-8046 or email Michele at michele@safnw.org.

GETTING TO PACK FOREST

Pack Forest is off Highway 7, near Eatonville, WA, approximately 1.5-2 hours from Seattle, 45 minutes from Olympia and 2-1/2 hours from Portland. For directions, go to www.packforest.org.

SAF CFE HOURS

CFE hours will be available onsite.

QUESTIONS?

Contact John Walkowiak, 360-570-3206, johnwa@dor.wa.gov

Registration Form – 2010 SAF PNW LEADERSHIP CONFERENCE

Registration includes all materials and 4 meals (Friday lunch, dinner & social, and Saturday breakfast and lunch)

Name _____ SAF Chapter _____ Email _____

Address _____ City/State/ZIP _____ Day Phone _____

Special dietary needs? _____ Cabin mate request _____ Lodging not needed _____ (Xmark here)

\$ _____ Conference Registration by Jan. 4 is \$90/person. After Jan. 4 is \$110/person.

\$ _____ Optional Field Workshop Registration by Jan. 4 is \$60/person (\$35/student). After Jan. 4 is \$75/person (\$45/student).

\$ _____ Lodging (single): _____ Thursday, Jan. 28 _____ Friday, Jan. 29 @ \$55/night

\$ _____ Lodging (double): _____ Thursday, Jan. 28 _____ Friday, Jan. 29 @ \$44/night

\$ _____ \$25 if not participating in the optional Field Workshop on Jan. 28, but using Pack Forest lodging on Jan. 28 and desire dinner on Jan. 28 and breakfast on Jan. 29

\$ _____ **TOTAL AMOUNT ENCLOSED** –No refunds after January 4–

*Return form & payment to:
PNW Leadership Conference, Northwest SAF Office,
4033 SW Canyon Rd., Portland, OR 97221*

METHOD OF PAYMENT

☐ **Check** (enclosed) ☐ **Credit Card** (Visa/MC)

Number: _____

Expiration Date: _____

Make checks payable to WSSAF

Calendar of Events

Managing Forestlands for Biomass Utilization, Dec. 10, Springfield, OR.
Contact: WFCOA, 503-226-4562, richard@westernforestry.org, www.westernforestry.org.

WSSAF Legislative Breakfast, Jan. 12, Olympia, WA. Contact: John Walkowiak, 360-567-3206, johnwa@dor.wa.gov.

Family Foresters Workshop, January 22, Spokane Valley, WA. Contact: UI Extension Office, Kootenai County, 208-446-1680.

PNW Forestry Leadership Conference, Jan. 28-30, Pack Forest, Eatonville, WA. Contact: John Walkowiak, 360-567-3206, johnwa@dor.wa.gov (see page 18 for registration information).

9th Annual Foresters' Forum, Feb. 3-5, Coeur d'Alene, ID. Contact: Jennifer Childers, 208-667-4641, jennifer@intforest.org.

Basic Road Design, Feb. 8-11, Corvallis, OR. Contact: FEI

LoggerPC V4, Feb. 17-18, Corvallis, OR. Contact: FEI

Cable Logging, Feb. 23-26, Corvallis, OR. Contact: FEI

Unit Planning & Layout, March 1-4, Corvallis, OR. Contact: FEI

Climate Change, Bioenergy and Sustaining the Forests of Idaho and Montana, March 3-4, Missoula, MT. Contact: Jay O'Laughlin, 208-885-5776, jayo@uidaho.edu.

Helicopter Logging, March 15, Olympia, WA. Contact: FEI

Cable Logging, March 16-19, Olympia, WA. Contact: FEI

Fuel Reduction, March 22-23, Olympia, WA. Contact: FEI

Mechanized Harvesting, March 24-25, Olympia, WA. Contact: FEI

OSAF annual meeting, April 7-9, Linn County Expo Center, Albany, OR. Contact: Gary Blanchard, 541-929-2477, gary@starkerforests.com.

Alaska SAF annual meeting, April 22-24, Anchorage, AK. Contact: Elizabeth Brann, 907-743-9519 or ebrann@fs.fed.us.

Contact Information

FEI: Forest Engineering Inc., 620 SW 4th St., Corvallis, OR 97333, 541-754-7558, <http://forestengineer.com>.

Send calendar items to the editor, **Western Forester**, 4033 SW Canyon Rd., Portland, OR 97221; fax 503-226-2515; rasor@safnwo.org.

Washington Farm Forestry Association annual meeting, April 25-27, Union, WA. Contact: WFFA, 360-736-5750, www.wafarmforestry.com.

Washington State SAF annual meeting, May 12-14, LaConner, WA. Contact: Paul Wagner, psq@glacierview.net.

Inland Empire SAF annual meeting, May 20-22, Wallace, ID. Contact: Richard Reid, 509-758-2411, rreid66519@aol.com.



A BALANCED APPROACH

▲
TIMBER MANAGEMENT
▲
ALTERNATIVES TO
CLEARCUTTING
▲
FOREST PLANNING
AND RESTORATION
▲



These forests have been
independently certified
as well managed.

Scott Ferguson 503-222-9772
Barry Sims 503-233-2131
Mark Miller 541-602-2180

www.TroutMountain.com

Forest stewardship
for productivity and diversity

FSC Trademark © 1996 Forest Stewardship Council A.C. • SCS-FM/COC-00062GN



We bring experience with owners that care about their product and customers.

Approximately 10 million seedlings in annual production
1 container site (plugs), 2 bareroot/transplant sites (p+1, 1+1)

Contract growing and spec seedlings for forestry and Christmas tree production

LET US GROW YOUR SEEDLINGS

David Gerdes Mike Gerdes
inquiries@silvaseed.com

FORESTERS • NURSERYMAN • SEEDSMAN

SILVASEED COMPANY
P.O. Box 118 • Roy, WA 98580 • (253) 843-2246

"Serving Many of the Reforestation Needs of the World From This Location Since 1889"

Developing a Nontimber Marketing Network for Small Forestland Owners

BY LITA BUTTOLPH

Small-scale forests are an important component of the U.S. forest base. Consolidation of global wood markets and lack of access to mills, however, have negatively affected the financial viability of many small tree farms. As income from timber sales becomes more limited, managing for nontimber forest products (NTFPs) can serve as a viable supplement or alternative to traditional wood markets for small forestland owners.

Hundreds of marketable products abound in U.S. forests including mushrooms, mosses, berries, saps and resins, seeds, transplants, floral greens and medicines. Many of these products



support multimillion dollar industries. For example, in 2002, the value of the floral greens harvest in Washington state was estimated at \$236 million; matsutake mushroom exports from the Pacific Northwest were estimated in 2003 at \$9.5 million, and moss and lichen exports were \$13 million. Nontimber forest products harvesting, buying, and processing activities can also serve as an important economic safety net for rural communities.

One of the major challenges for landowners wanting to start or expand an NTFP business has been a lack of market information. Unlike the timber industry, which has a highly developed market infrastructure, there is very little in the way of market data on NTFPs (e.g., contact information for buyers and sellers, seasonal price fluctuations, long-term price trends and risk analyses). Without these data, which

are often necessary for developing business plans, NTFP business owners may be ineligible for loans or grants to start-up or expand their business.

In January 2009, the Institute for Culture and Ecology, in collaboration with Oregon State University Forestry Extension, received a grant from the USDA-CSREES National Research Initiative to help develop and expand markets for NTFPs. The project, called Wild Forest Goods, is a first step toward developing an economic infrastructure for NTFPs. One component of the project is to better connect NTFP buyers, sellers, producers, processors and harvesters using an online, regional business directory. The project taps into the Oregon Forest Industry Directory (OFID), a free, online business directory hosted and maintained by Oregon State University's Wood Innovation Center. The site was originally developed to connect forest landowners and small businesses that buy and sell traditional wood products. Project Wild Forest Goods is helping to expand OFID's NTFP section, while taking advantage of its existing database, structure and long-term maintenance capacity.

The directory targets small businesses based primarily in the Pacific Northwest, including those that exchange a variety of forest products and services. Products may be at any level of processing (e.g., raw, fresh, dried, preserved, extracted). Businesses wanting to register online can go to www.orforestdirectory.com.

The Oregon Forest Industry Directory serves as a first step toward developing networking capacity among NTFP businesses in the region. Project Wild Forest Goods will include additional networking strategies, such as peer learning networks, to connect businesses regionally and nationally. More information about Project Wild Forest Goods can be found at www.ifcae.org/wildforestgoods. ♦

Lita Buttolph is a research associate for the Institute for Culture and Ecology in Portland, Ore. She can be reached at 503-331-6681 or lbuttolph@ifcae.org.



Garlon® Herbicide Versatility

Targeted control of unwanted competing brush.

Freshly Cut Stumps

Apply Garlon 3A right after cutting hardwoods.

Resprouted Hardwoods

- Garlon 4 Ultra thinline hand spray for small bigleaf maple clumps.
- Low Volume Basal with Garlon 4 Ultra in W.E.B. oil for small to large clumps.

For information on this or any other herbicides, call:

Bruce Alber 503-227-3525—western Oregon & western Washington

Joel Fields 509-928-4512—eastern Washington, Idaho & Montana

Carl Sostrom 509-928-4512—eastern Washington, Idaho & Montana

Scott Johnson 916-991-4451 & Jerry Gallagher 530-570-5977—California

9685 Ridder Rd. S.W., Suite 190 • Wilsonville, OR 97070

Chapter Gives Scholarship

The Southwest Washington Chapter of SAF has selected Michael Farnum to receive its first scholarship. The scholarship is based on an essay that included a personal statement about the applicant's plans and goals, and describing their experiences and involvement in areas where they have exhibited leadership, community involvement, personal development and initiative while including how these experiences will help them to achieve some of the principles and pledges of the SAF Code of Ethics.

Michael is a student at Green River Community College and is studying Geographic Information Systems. The scholarship award was \$500 and sponsorship to the Washington State Society annual meeting.

For additional information, contact Adrian Miller at 360-705-9284 or amiller@wfpa.org. ♦

Forestry Center Honors Jim Brown

Long-time former Oregon State Forester, SAF Fellow and World Forestry Center (WFC) board member Jim Brown was inducted into the World Forestry Center's Leadership Hall of Fame. The induction and recognition dinner took place on October 30, 2009, in Cheatham Hall on the WFC campus.

Donations in tribute of Jim's accomplishments support WFC's environmental education programs. A complete list of donors honoring Jim will be finalized on January 15, 2010, so there is still time for you to add your name to the list honoring Jim. Send checks payable to World Forestry Center, 4033 SW Canyon Road, Portland, OR 97221, to the attention of Maria Jeffrey. ♦

Coos Chapter Awards Scholarships

Dylan Hinter and Tyler Nay, Forest Engineering majors at Oregon State University, have received the C. Wylie Smith III Memorial Scholarship. Both graduated from Myrtle Point.

The scholarship was established in 1973 in memory of C. Wylie Smith III, who lost his life in an industrial accident at age 29. A 1966 graduate of the OSU College of Forestry, he was a founder of Coos Head Lumber Company.

This scholarship fund is administered by the OSU Foundation and recip-

ients are chosen by the Coos Chapter. Recipients must be full-time undergraduate students enrolled in the College of Forestry with majors in Forest Engineering, Forest Management or Forest Products. Selection is based on academic performance, potential for success in the profession and financial need, with a preference to students from Coos, Curry or Douglas counties.

For information, contact Shaun Harkins at shaun.harkins@plumcreek.com. ♦



TODAY'S MOST DESIRABLE TREES WEAR THE SFI® LABEL. NO WONDER THEY'RE IN DEMAND.

Once upon a time, certified wood products filled a small market niche. Nowadays, sustainable forestry practices are a basic requirement, and it's no passing fashion. That's why more than 152 million acres of North American forestland are now independently, third-party audited to the rigorous SFI® standard. Join our more than 200 SFI members. It's a new day in the forest.



**SUSTAINABLE
FORESTRY
INITIATIVE**

*Good for you.
Good for our forests.™*

Find out more at sfiprogram.org



Policy Scoreboard

Editor's Note: To keep SAF members informed of state society policy activities, Policy Scoreboard is a regular feature in the Western Forester. The intent is to provide a brief explanation of the policy activity—you are encouraged to follow up with the listed contact person for detailed information.

Thinning Position Adopted; Orlando Talk on PNW Policy Proposals. OSAF's newest position statement is "Thinning on Public Lands in Oregon," which was prompted in part by recent policy proposals that would limit timber harvesting on public lands solely to thinning. Strict age- or diameter-based harvest restrictions also have been a key feature of some current or proposed policies, and raise concerns that silvicultural prescriptions under such restrictions may not achieve desired management objectives. The position highlights the many benefits of thinning as well as the fact that professionals must closely monitor forest conditions and vary prescriptions over time and among specific locations to best achieve long-term objectives. The new position on thinning, as well as the Forestry Issues booklet with all the other OSAF position statements, are available as PDFs at www.forestry.org.

At the SAF National Convention in Orlando, Paul Adams and National SAF Policy Director Erica Rhoad presented a talk titled "SAF Reviews and Responds to Northwest Federal Forestry Policy Proposals." The talk described bill proposals by Rep. DeFazio and Sen. Wyden, and how OSAF and National SAF collaborated and responded to the proposals. One of the objectives of the presentation was to raise awareness and under-

standing among SAF members outside the region about these striking attempts to redefine forestry and legislate silviculture and portions of the Northwest Forest Plan. Contact: Paul Adams, OSAF Policy chair, 541-737-2946; paul.adams@oregonstate.edu.

Tours for Oregon Public Leaders Held. OSAF members led an August field tour aimed at Oregon's Congressional delegation and other public leaders on "Forestry on Public Lands in Oregon." The tour was held at OSU's McDonald Forest and featured speakers and research studies that highlighted how various silvicultural strategies can be more or less effective in achieving diverse management objectives. A second field tour targeted at state legislators and private forestry issues was held in the Salem area in October. Both tours were supported by an SAF Foresters' Fund grant, and similar OSAF tours could be held more regularly in the future to develop stronger ties with our policy and decision makers as well as to provide a professional perspective on important forestry issues. Contact: Paul Adams, OSAF Policy chair, 541-737-2946; paul.adams@oregonstate.edu.

Inland Empire SAF partners with Intermountain SAF to plan climate change/bioenergy conference. Featuring the related topics of wood bioenergy and climate change, and designed to attract an audience from outside the forestry community, Idaho SAF members are planning a conference for March 3-4, 2010, in Boise titled "Climate Change, Bioenergy and Sustaining the Forests of Idaho and Montana." It is a follow-up to the forest bioenergy workshops held in Missoula, Mont., on September 22-24 in conjunction with the Plum Creek Lecture Series. Contact: Jay O'Laughlin, IESAF Policy chair, 208-885-5776, jayo@uidaho.edu.

WSSAF Legislative Breakfast Planned. The WSSAF is seeking membership assistance and involvement for the upcoming WSSAF Legislative Breakfast set for January 12, 2010, at the State Capitol Building Rotunda in Olympia. Members are urged to invite their state representatives and senators to meet them at the breakfast to discuss forestry issues. If you want to get involved or need further information, contact either John Walkowiak at 253-320-5064, jewalkowiak@harbornet.com or John Ehrenreich at 253-942-9042, jehrenreich@wfpa.org.

SAFers in State Leadership Positions. Commissioner of Public Lands Peter Goldmark recently named two WSSAF members, Eric Wisch and Joseph Shramek, to DNR Division Leadership positions. Eric Wisch, CF and 26-year veteran of the WA DNR, was named manager of the Pacific Cascade Region based out of Castle Rock. Joseph Shramek is a 13-year veteran of the WA DNR and was named division manager for Resource Protection. Commissioner Goldmark also named Darin Cramer as division manager for Forest Practices and Kristin Swenddahl as division manager for Aquatic Resources. Contact: John Walkowiak at 253-320-5064, jewalkowiak@harbornet.com

Recreation Work Group Rolling. The Sustainable Recreation Work Group will make final recommendations to the Washington State Legislature on a long-term vision for the future of recreation on land managed by the WA DNR in December 2009. The work group has reviewed over 2,000 comments from nine public workshops and online surveys in developing these recommendations to deal with newer forms of recreation such as off-road vehicle riding, mountain biking and paragliding, as well as hiking, camping, hunting and fishing. The recommendations will also address increased pressures on state lands from a growing Washington population and encroachment of development on state open space. Contact: Sustainable Recreation Work Group, 360-902-1730 or sustainable recreation@dnr.wa.gov. ♦

FOREST RESOURCES TECHNOLOGY

• SAF Recognized •

Bret Michalski, AAS, Wildlife Science
Michael Fisher, Ph.D., Forestry, Range Management
Ron Boldenow, Ph.D., C.F., Forestry

<http://forestry.cocc.edu> E-mail: mfisher@cocc.edu (541) 383-7755

CENTRAL OREGON COMMUNITY COLLEGE



Bend, Oregon

Inland Empire Foresters to Commemorate 1910 Fires

The small fires that became the Great 1910 Fire were burning as early as May of that year. By mid-summer they had grown to cover hundreds of square miles of northern Idaho and western Montana. Towns were threatened, lives lost and forest resources of an untold value were destroyed.

In May of 2010 the Inland Empire Society of American Foresters will take a look at this pivotal event at its annual meeting, "The Fires of 1910: A Century Later." The meeting will be in Wallace, Idaho, at the Wallace Civic Auditorium May 20-22. Meeting sessions will look at how the fires started, if 1910 could happen again, the natural resource and community impacts of the fires, and how the U.S. Forest

Service as an agency changed and how our perspective on fires was changed forever. Scheduled field trips include a Silver Mountain gondola ride to view the fire area 100 years later and a trip to the Pulaski Mine where Ranger Ed Pulaski saved his men from sure death in the flames.

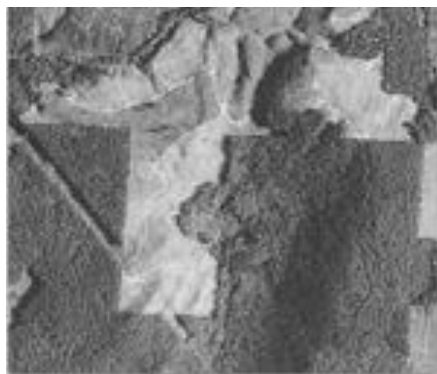
Meeting registration materials will be available shortly after the first of the year. This will be one of the first and probably the most comprehensive of meetings and commemorations surrounding the 1910 fires over the next year, so now is the time to mark calendars for May 20-22, 2010.

For additional information, contact Richard Reid at 509-758-2411 or RReid66519@aol.com. ♦

NAIP Imagery Flown for Oregon and Washington

Both Oregon and Washington were flown in 2009 for the collection of one-meter orthorectified imagery under the National Agriculture Imagery Program. The imagery is available in a MrSID format, allowing users to view the imagery on computers with GIS software, Pocket PCs with ArcPad or with Windows Explorer. The original format is UTM coordinates and meters for units.

The imagery was collected using digital sensors in aircraft. Every county in Oregon and Washington has full image coverage available in the form of a Compressed County Mosaic. The MrSID file format allows users to view an entire county of one meter color



orthorectified imagery.

For more information on NAIP, visit www.fsa.usda.gov/FSA/apfoapp?area=home&subject=prog&topic=nai or contact Jon Aschenbach with Resource Supply, LLC at 503-521-0888 or jon@resourcesupplyllc.com. ♦

"2009 NAIP Imagery Available NOW for OR & WA"

The 2009 NAIP imagery is 1 meter, orthorectified, color imagery suitable for ArcView, ArcGIS, Map-Info, and ArcPad. We've enhanced it to run on Pocket PCs for all counties in Washington and Oregon. See your GPS position anywhere in a county. Up to 5 or more counties can be placed on an SD or CF card. Call Jon Aschenbach at 503-707-6236 for prices for other projections besides State plane.

NAIP Original

- UTM, Meters, MrSID format
- \$40/County or \$495/State
- Available Immediately!!!

NAIP for Pocket PCs

- Run entire counties in ArcPad
- State Plane, NAD83, Feet
- \$30/County or \$395/State



State Sets Available on Free Loaner External Drive

Resource Supply, LLC 11607 SW Winter Lake Dr., Tigard, OR 97223
For info, email: jon@resourcesupplyllc.com or call 503-707-6236

Resource

Supply

Got Email?

Stay connected with your state society by updating your email address. Both the Oregon and



Washington State Societies send out messages via email about state society activities and volunteer needs through an e-marketing system called *Constant Contact*. For members to receive these messages (and others that may be sent out by National and local chapter units), a current email address must be on file at the National Office.

With the recent update of the SAF National Office website (www.eforester.org), it's never been easier to update your member information online. Here's how to check your current profile and make changes to it.

- Go to www.eforester.org.
- Click on the "profile" link located on the top of the page, which takes you to a member login page.
- Provide your username (membership number) and password (last name with an initial capital letter and no spaces). Don't know your membership number? It's listed on every Forestry Source and Journal of Forestry label directly above your name.
- Review your profile for accuracy; click on "edit your profile" if changes/additions need to be made.

Make a point to stay connected with local SAF happenings by updating your email information.

Have questions? Contact Michele Docy at the SAF Northwest Office at 503-224-8046 or michele@safnwo.org.

Do You Have a Service or Product to Advertise in Western Forester?
Contact us for info & rates
503-224-8046/rasor@safnwo.org

SOCIETY OF AMERICAN FORESTERS

Western Forester

4033 S.W. Canyon Road
Portland, Oregon 97221

Non-Profit Org.
U.S. POSTAGE
PAID
PORTLAND, OR
PERMIT NO. 16

PRINTED ON
RECYCLED PAPER

Measure More. Move Less.

From adjustable bar scales for BAF and
diameter measurements...

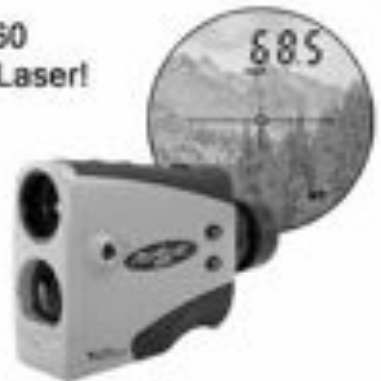
To lasers that measure distance, height, azimuth
and can penetrate brush...

We have taken the typical limitations and
restrictions out of the equation.

Featured
Product

LTI's TruPulse 360 All-in-One Compass Laser!

- Built-in 3-shot routine for tree heights
- Perform GPS laser offsets for mapping
- Built-in 2-shot routine for danger tree clearances and crown widths
- Calculate log deck or chip pile volumes
(LTI's MapPoint software with volume to request)



ATTERBURY CONSULTANTS, INC.
"Professional State-of-the-Art Forestry"

Appraisals & Consulting:

Timberland Appraisals - Due Diligence - Timber Management

GIS Mapping & Analysis:

Timber Typing - Timberland Owners & Mgt Locations

Cruising & Inventory:

Highly Trained with Current Technology - Reports Tailored to Clients Needs

Software & Products We Use:

SuperACE, FLIPS, & Pocket SuperEASY

Authorized ESRI, Laser Technology & TDS Dealer

Seminars & Training:

Continuing Education Credit - ArcPad for Foresters - Timber Cruising

Visit: www.atterbury.com

Call: (503) 646-5393

Atterbury Consultants, Inc.
3800 SW Cedar Hills Blvd. #145
Beaverton, OR 97005

**LASER
TECHNOLOGY**
Authorized Dealer