



Partners News

Partners in Forestry Landowner Cooperative, 6063 Baker Lake Rd. Conover, WI 54519 logcabin@nnex.net 715-479-8528

July-August 2009

Features of the summer issue:

- A new look at alternative energy calculations
- Details and registration materials for the upcoming PIF-sponsored estate planning workshop
- How to recognize Red Pine Pocket Mortality—and what to do about it

Welcome to our new members!

Clyde and Janet Samsel of Hancock, WI

Jean Clark of Hancock, WI

Greg Schuenke of Eagle River, WI

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Early summer wildlife activity includes nesting hermit thrush and black bear climbing red pine.

Photo credits: Joe Kaplan and Mark Hovel

Forest Estate Planning—is there a “dirty little secret”?

by Jeff Niese

The PIF workshop on Forest Estate Planning, “Preserving Your Living Legacy” is fast approaching. Everyone is looking forward to this important workshop, and that’s good. I thought it might be a good time to share a few thoughts.

There’s one important “dirty little secret” that those of us in the forestry business don’t often talk about. Sure, we quote statistics on forest fragmentation, the motivations of private forest landowners, the need for education, and the consequences (poor logging

jobs, fragmentation, de-graded forests) if landowners don’t make the “right” decisions. BUT, what we DON’T talk about is this: Every family that owns forest land has family dynamics that they must deal with if that forest is going to continue to be a beautiful, sustainable, forest. If those dynamics are not dealt with in a fair and timely fashion, people suffer and the forests suffer, and all of society suffers.

I spent 18 years of my career serving as an Extension forester and as a consulting forester. I have

tried to help hundreds of families plan for the best possible management of their forest. But one thing I’ve learned is this: unless the FAMILY agrees on a course of action and sticks with it, all the “experts” in the world cannot provide a positive outcome for that forest. There were a few clients I had as a consultant who had beautiful forests, productive timber, covering hundreds of acres. They wanted me to manage their lands, and I was only too happy to agree. So, I would sit down around the

Story continued on Page 2

From the Director: Joe's Comments



Hovel stands by a white pine near the Pilgrim River, Houghton Co., MI

June winds down with at least some damp weather, as the Northwoods is in our fifth consecutive summer of drought. Between persistent droughts and the economic challenges, one needs to reflect on the positive influences we all enjoy and most of us steward. Our

forestlands in the region play a vital role; not only are they essential to the local economy, they also provide clean air and water and recreational opportunities to a growing nation.

Most of us are well aware of these factors, and care deeply of the future trends and actions on these lands. In order to help you learn of the choices for the future of your lands, I welcome you to join us at Trees for Tomorrow in Eagle River on August 1st. This is PIF's main event of the year, requiring a great deal of energy and time in planning, and we really need your participation. As you can see in the feature in this

newsletter, we have lined up a top-notch team of speakers. The legal advice from Attorney Mark Bradley alone makes this event worthwhile, and could save us all a lot of time and legal fees. The day will provide plenty of time for fellowship, one on one discussion with the speakers, activities for kids with a Trees naturalist, wholesome food, and a chance to tell your PIF board what you want from the organization! All PIF members and their families and guests can register at a discounted price. Make sure to register early to avoid late-registration costs.

As a PIF member, we really appreciate your "talking up" this event. Tell your fellow woodland owners, bring your kids and grandkids who may be interested in the fate of your family lands as well as that of the greater forest landscape.

We soon will have a call for new voices to contribute to the organization by holding a position on the PIF board of directors. Are you interested, or do you know someone who might be? Getting involved with the board is a great way to shape the direction of the organization and insure that PIF remains viable and relevant by holding events such as the estate workshop.

Estate planning, from page 1
kitchen table with the family decision-makers (those with their names on the deeds), and try to come up with a course of action. I would explain what I had seen as I'd walked their woods with them, and how that might relate to implementing their MFL or other plan if they had one. And, if they did not have a "forest plan", I would insist on writing one for them before we did anything else.

Guess what I found out? I learned that managing the forest

was not the biggest challenge. That was EASY compared with managing the PEOPLE who owned the forest together, and working out their differences so that I could have a clear path to follow as their land manager. In some cases it took me years of waiting, cajoling, and meeting to get two brothers, a sister, and a parent to agree on a course of action. Sometimes it was a hopeless situation, and I found myself telling the family that I could not help them, and they would need to find a different land manager.

Often I would come home and tell my wife (who is a pastor and counseling expert) that SHE should have been at that kitchen table, not me. Sometimes I was wishing I could have had a counselor with me AND an estate attorney.

Many families have split right down the middle because of differences of opinion on how (or whether) to manage the family lands. These problems are only going to become more challenging as hundreds of thousands of properties change title in the coming decade.

There is help for family-owned forests facing these challenges. We have experts coming to provide that help on August 1st. Now is the time for you to have that conversation with your family, your friend, your neighbor, or your co-worker. Give them a brochure (maybe even offer them a ride) and invite them to attend the workshop with you.

Jeff Niese is secretary of PIF's board and a forester with the State of Wisconsin Board of Commissioners of Public Lands.

Recognizing Red Pine Pocket Mortality

by John Schwarzmann

Do you have red pines dying in a pocket pattern? Be aware of red pine pocket mortality.

Red pine pocket mortality is caused by a complex of insects and the fungi *Leptographium terrebrantis* and *L. procerum* and was first identified in Wisconsin in 1975. National distribution of this syndrome is unknown. Thinned, plantation-grown red pines between the ages of 30-45 are most likely to show symptoms of this syndrome.

Site Factors/Stand History

Studies attempting to identify site factors associated with red pine pocket mortality are ongoing. Red pine pocket mortality is a disease of plantation-grown red pine. Red pine pockets are more common in stands that have been thinned than in unthinned stands; root grafts provide a pathway for *Leptographium* to move from tree to tree. Insect vectors including root collar weevil (*Hylobius radialis*), pales weevil (*H. pales*), red turpentine beetle (*Dendroctonus valens*), pitch-eating weevil (*Pachylobius picivorus*), and *Hylastes porculus*. The insects feed on freshly cut stumps and the lower stem and roots of red pine, transmitting the fungus *Leptographium terrebrantis* and *L. procerum* into the lower stem and root system. Once established in the communal root system of a red pine plantation, *Leptographium* spreads to healthy trees via root connections. Trees infected with *Leptographium* are stressed by a



decrease in water conduction and a decrease in the production of defensive compounds. These stressed trees continue to attract lower stem feeding beetles, particularly the red turpentine beetle. Bark beetles (*Ips pini* and *I. grandicollis*) are ultimately responsible for tree mortality.

Red Pine Pocket Mortality - Impact

Infected trees will have reduced height and diameter growth. As disease progresses, successful invasion by the pine bark beetles occur. Infestation by the pine bark beetle kills the tree. Red pine pocket mortality has NOT been observed in jack or white pine plantations. White pine regeneration within pockets also appears to be unaffected by this syndrome. The number of infection centers in a stand can vary widely. Infection centers create gaps in the forest canopy where brush and early successional trees can regenerate.

Red Pine Pocket Mortality - Symptoms & Signs
Pockets typically start small with one to a few dead

trees surrounded by trees that have reduced shoot growth and thin crowns. Each year, a few trees on the pocket edge may die and the edge of the pocket expands. Over time, pockets can become quite large; 4-acre pockets have been observed.

Pitch tubes, which are signs of attack by the red turpentine beetle, *Dendroctonus valens*, can be present on the lower bole of trees in the pocket margin. The wood in the vicinity of the pitch tubes and in the root collar area may be stained blue-black. Emergence holes of the pine engraver, *Ips pini*, are often evident on the dead trees within the pockets.

Red Pine Pocket Mortality - Management

The biology of RPPM is not fully understood, and at this point, there is no specific control that is proven to be effective to limit the further spread of this problem. During thinnings, harvesting trees that are showing dieback (fader trees) along the margin of the pocket will

help reduce economic losses. Harvesting additional healthy trees along the pocket margin and into the healthy stand will delay the appearance of crown symptoms in the stand. However, it is likely that the dieback and mortality of additional trees will eventually occur. When salvage harvesting is considered, foresters and landowners should choose a practice that would best suit their long-term forest management plan and management objectives. Management options are listed below. Some of the options presented here include practices that have been performed on an experimental basis in a hope of reducing the risk of further spread of the problem, however the effectiveness of these approaches is unknown.

Information cited from the WIDNR website. John Schwarzmann is vice president of PIF's board and forest supervisor with the State of Wisconsin Board of Commissioners of Public Lands.

Harvesting Options

- Leave the pocket as a natural opening
- Cut dead trees and trees showing dieback and/or yellowing of the foliage (fader trees) within and adjacent to the opening
- Cut dead trees and trees showing dieback and/or yellowing of the foliage, and also cut a buffer around the pocket
- Cut dead trees and trees that are showing dieback and/or yellowing of the foliage (fader trees), cut a buffer area around the pocket, and create root graft barriers around the buffer area by severing the root system.
- Cut dead trees and trees that are showing dieback and/or yellowing of the foliage (fader trees), cut a buffer area around the pocket as described above, and treat the stumps with a herbicide, such as Garlon 4 (Triclopyr), Tahoe 4E (Triclopyr) or other products that are labeled for cut surface applications.

Energy calculations for North America

Excerpted with permission from:

David J.C. MacKay. *Sustainable Energy – without the hot air.* UIT Cambridge, 2008.

ISBN 978-0-9544529-3-3.

Available free online from www.withouthotair.com

Compiled by Joseph LeBouton of *Sylvania Forestry*

The average American uses 250 kWh per day. Can we generate that much power with renewable energy? What if we imagine imposing shocking efficiency measures (such as efficient cars and high-speed electric trains) such that Americans were reduced to the misery of living on the mere 125 kWh/d of an average European or Japanese citizen?

Wind

A study by Elliott et al. (1991) assessed the wind energy potential of the USA. The windiest spots are in North Dakota, Wyoming, and Montana. They reckoned that, over the whole country, 435 000 km² of windy land could be exploited without raising too many hackles, and that the electricity generated would be 4600 TWh per year, which is **42 kWh per day per person** if shared between 300 million people. Their calculations assumed an average power density of 1.2 W/m², incidentally – smaller than the 2 W/m² we assumed in Chapter 4. The area of these wind farms, 435 000 km², is roughly the same as the area of California. The amount of wind hardware required (assuming a load factor of 20%) would be a capacity of about 2600 GW, which would be a 200-fold increase in wind hardware in the USA.

Offshore wind

If we assume that shallow offshore waters with an area equal to the sum of Delaware and Connecticut (20 000 km², a substantial chunk of all shallow waters on the east coast of the USA) are filled with offshore wind farms having a power density of 3 W/m², we obtain an average power of 60 GW. That's **4.8 kWh/d per person** if shared between 300 million people. The wind hardware required would be 15 times the total wind hardware currently in the USA.

Geothermal

I mentioned the MIT geothermal energy study (Massachusetts Institute of Technology, 2006) in Chapter 16. The authors are upbeat about the potential of geothermal energy in North America, espe-

cially in the western states where there is more hotter rock. “With a reasonable investment in R&D, enhanced geothermal systems could provide 100 GW(e) or more of cost-competitive generating capacity in the next 50 years. Further, enhanced geothermal systems provide a secure source of power for the long term.” Let’s assume they are right. 100 GW of electricity is **8 kWh/d per person** when shared between 300 million.

Hydro

The hydroelectric facilities of Canada, the USA, and Mexico generate about 660 TWh per year. Shared between 500 million people, that amounts to 3.6 kWh/d per person. Could the hydroelectric output of North America be doubled? If so, hydro would provide **7.2 kWh/d per person**.

What else?

The total so far is $42 + 4.8 + 8 + 7.2 = 62$ kWh/d per person. Not enough for even a European existence! I

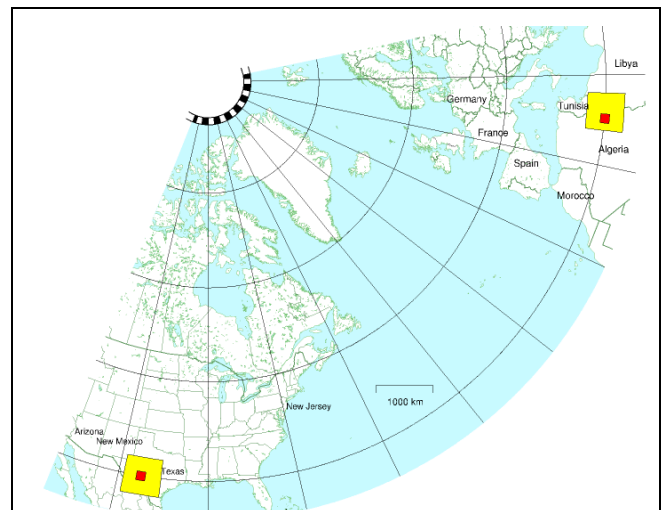


Figure 30.3. [A] 600 km by 600 km square in North America, completely filled with concentrating solar power, would provide enough power to give 500 million people the average American’s consumption of 250 kWh/d. [...] I’ve assumed a power density of 15 W/m², as before. The area of one yellow square is a little bigger than the area of Arizona, and 16 times the area of New Jersey. Within each big square is a smaller 145 km by 145 km square showing the area required in the desert – one New Jersey – to supply 30 million people with 250 kWh per day per person.

could discuss various other options such as the sustainable burning of Canadian forests in power stations. But rather than prolong the agony, let's go immediately for a technology that adds up: concentrating solar power. Figure 30.3 shows the area within North America that would provide everyone there (500 million people) with an average power of 250 kWh/d.

The bottom line

North America's *non-solar* renewables aren't enough for North America to live on. But when we include a massive expansion of solar power, there's enough. So North America needs solar in its own deserts, or nuclear power, or both.

My estimates	IEE	Tyndall	IAG	PIU	CAT
Geothermal: 1 kWh/d	Geothermal: 10 kWh/d				
Tide: 11 kWh/d	Tide: 2.4	Tide: 3.9	Tide: 0.09	Tide: 3.9	Tide: 3.4
Wave: 4 kWh/d	Wave: 2.3	Wave: 2.4	Wave: 1.5	Wave: 2.4	Wave: 11.4
Deep offshore wind: 32 kWh/d					Offshore: 21 kWh/d
Shallow offshore wind: 16 kWh/d	Offshore: 6.4	Offshore: 4.6	Offshore: 4.6	Offshore: 4.6	
Hydro: 1 kWh/d		Hydro: 0.08		Energy crops, waste incin'n, landfill gas: 31 kWh/d	Hydro: 0.5
Biomass: food, biofuel, wood, waste incin'n, landfill gas: 24 kWh/d	Wastes: 4	Energy crops, waste: 2	Energy crops, waste, landfill gas: 3		Biomass fuel, waste: 8
PV farm (200 m ² /p): 50 kWh/d				PV: 12	
PV, 10 m ² /p: 5		PV: 0.3	PV: 0.02		PV: 1.4
Solar heating: 13 kWh/d					Solar heating: 1.3
Wind: 20 kWh/d	Wind: 2	Wind: 2.6	Wind: 2.6	Wind: 2.5	Wind: 1

"Defence": 4	Geothermal: 1 kWh/d
Transporting stuff: 12 kWh/d	Tide: 11 kWh/d
	Wave: 4 kWh/d
Stuff: 48+ kWh/d	Deep offshore wind: 32 kWh/d
	Shallow offshore wind: 16 kWh/d
Food, farming, fertilizer: 15 kWh/d	Hydro: 1 kWh/d
Gadgets: 5	Biomass: food, biofuel, wood, waste incin'n, landfill gas: 24 kWh/d
Light: 4 kWh/d	
Heating, cooling: 37 kWh/d	PV farm (200 m ² /p): 50 kWh/d
Jet flights: 30 kWh/d	PV, 10 m ² /p: 5
	Solar heating: 13 kWh/d
Car: 40 kWh/d	Wind: 20 kWh/d

Figure 18.6. Estimates of theoretical or practical renewable resources in the UK, by the Institute of Electrical Engineers, the Tyndall Centre, the Interdepartmental Analysts Group, and the Performance and Innovation Unit; and the proposals from the Centre for Alternative Technology's "Island Britain" plan for 2027.

Figure 18.1. The state of play after we add up all traditional renewables.



YOUR LIVING LEGACY

Estate planning for the forest

8:30 AM, August 1st, 2009

Trees for Tomorrow, Eagle River, WI

Mark your calendars for this timely workshop! This event is designed to help woodland owners make informed decisions on how to protect their estates and leave their land in able hands. The day begins at 8:30 AM with registration and morning refreshments. At 9:00 Carol Nielsen from the Wisconsin DNR division of forestry will frame the results of the recent "offspring" study, an investigation on how Wisconsin's woodlands are poised to be passed on to the next generation. Following Carol, attorney Mark Bradley, an expert on estate planning, will prime us on the importance of caring for your estate. Next, Rodney Walter of the Nature Conservancy will discuss conservation options.

A noontime meal is included, followed by a panel discussion including land trust representatives and landowners who have taken measures to protect their forests. There will also be time for questions of the speakers and informal one-on-one conversation with speakers and panel members.

An educational activity is planned for younger people, ages 9-16, and will be held by Trees for Tomorrow staff.

This is an event that you do not want to miss. Even if you already have protected your estate, the up-to-date information from Mr. Bradley will save you many times over in legal fees! See form on next page for registration information.

SPEAKER PROFILES

Carol Nielsen has worked for the Wisconsin Department of Natural Resources for twenty four years in a variety of positions and locations including the private lands forester in Sawyer and Iowa Counties, the Forest Tax Program Manager and the Private Forestry Specialist (her current position) in Madison. She has a BS in forest management from University of Wisconsin-Stevens Point. After graduation and before coming to work for the DNR Carol was in the Peace Corp in Guatemala.

Carol and her husband own 240 acres in Southwest Wisconsin (Richland County) where they implement the practices they encourage others to do.

Mark Bradley is an attorney with the law firm of Ruder Ware in Wausau and Eau Claire. Mr. Bradley chairs the firm's Trusts and Estates Practice Group and is a member of its Board of Directors. His areas of concentration include family business succession planning, estate planning, and trust administration.

Mr. Bradley is a member of the estate planning faculty of the State Bar of Wisconsin and teaches at state and national continuing education programs for attorneys, accountants, and financial planners. He is a co-author of Eckardt's Workbook for Wisconsin Estate Planners, published by the State Bar of Wisconsin. Mr. Bradley is an elected fellow of the American College of Trust & Estate Counsel. He is also listed in the Trusts and Estates section of Best Lawyers In America. Since 2003, Mr. Bradley has served as a member of the University of Wisconsin System Board of Regents. In June he completed his second year as President of the Board.

Rodney Walter of the Nature Conservancy has served as the Director of Habitat Protection since 2006. Here he has made additions to the protected land in the Baraboo Hills and Military Ridge preserves and in Door County, and arranged a conservation buyer-funded land purchase for Catherine Wolter Wilderness Area in Vilas County.

Continued next page

Rodney started full time with the Conservancy in 2000 as a land protection specialist. In that position he worked to purchase land for the Baraboo Hills preserves and coordinate Conservancy and partner participation in the "Highway 12 Agreement." This conservation effort allowed major improvements of US Highway 12 in exchange for protection of farmland in Dane County and forested land in the Baraboo Hills.

Prior to joining the Conservancy, Rodney worked for the Wisconsin Department of Natural Resources for 10 years. There he held several positions, including management of the DNR conservation easement program and DNR land records, and positions that promoted management for rare species on State and private lands. Rodney has a Masters degree in Landscape Architecture from UW-Madison. He is a former volunteer member of Clyde Community Center Board in the town of Clyde, located in Iowa County, where he currently lives.



Trees for Tomorrow is located at 519 Sheridan St, Eagle River, WI.

Workshop Registration Form

***DISCOUNTED EARLY BIRD REGISTRATION:**

The workshop rate of \$15 members (and guests)/ \$25 non-members (includes morning snacks & lunch) applies only to registrations post-marked by July 22, 2009. *(All registrations post-marked after July 22 will be \$20 members / \$30 non-members.)*

** Not a PIF member? Join now and save.

# _____ attendees @ \$15 ea.	=	\$ _____
# _____ attendees @ \$25 ea.	=	\$ _____
# _____ children (ages 9 – 16) @ \$15 ea.	=	\$ _____
**PIF annual membership fee @ \$25		\$ _____
Total enclosed	=	\$ _____

Participant Name(s): _____

Child's Name(s): _____

Complete Mailing Address:
Name: _____

Address _____

City _____ State _____ Zip _____

Phone: _____ E-mail _____

PIF MEMBERSHIP FORM

_____ \$25 Voting member (owns or manages 10 acres or more)

_____ \$25 Supporting member (owner of less than 10 acres or organization)

Name _____

Mailing Address (if different from registration)

Check# _____ Date _____

Phone _____

Email _____

Make checks payable and mail to: Partners in Forestry, 6063 Baker Lake Road, Conover, WI 54519

Do you have questions or need information? 715-479-8528 or (logcabin@nnet.net)



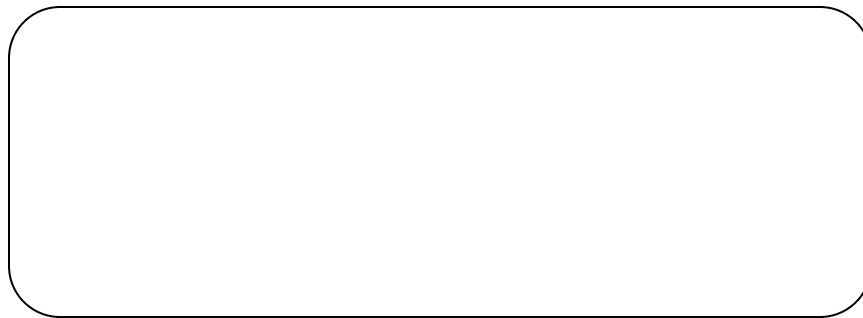
ITEMS FOR SALE:
As a service to
PIF members, con-
tact Joe for spe-
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your needs for:

- garden and tree amend-ments
- wood finishes and preserva-tives
- grass seed for trails
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Protecting your wooded land for the future is essential to clean water, clean air, wildlife habitat, sustainable wood supply...all things that are necessary to society and health, and that are gone forever if the land is developed.