

IOWA  
WOOD

Volume XI

# SPLINTERS

Spring 2009

A Communication Newsletter for the  
Loggers & Wood Businesses of Iowa

The Forestry Bureau of the Iowa DNR will publish this newsletter two times per calendar year. "Iowa Wood SPLINTERS" will be a communication link for the loggers and wood-using businesses of Iowa. It will feature forest products marketing and utilization news, safety notes, upcoming educational events, new literature and a classified ads section for selling or buying forest products, equipment, services, and employment opportunities. There is no charge for the newsletter or advertising items on the Bulletin Board. For specific questions about the newsletter, please contact the editor at (515) 242-5966.

## **Update on Forest Management Policy on State Forests**

The Iowa DNR Forestry Bureau has completed Forest Management Plans on our four major State Forests. It is our goal to intensify our forest management to serve as an example to all Iowans of the many benefits of sustainable forestry.

One of the side effects of this intensive management is that it will significantly increase the amount of timber harvesting on the State Forests as we move towards our goal reaching our allowable cut. Over the next few years we will be moving from harvesting sixty to eighty acres annually to two hundred and forty acres annually. This is the result of our use of harvesting as a tool to promote oak regeneration, to diversify the age structure of our forest stands and to create early successional wildlife habitat.

We have held public meetings at each of the State Forests to discuss the forest management plans and currently have enjoyed the overwhelming support of those plans by the public. However, I suspect that as we continue down this road we will meet with some opposition from those folks who did not attend the meetings, do not understand relationship between oak regeneration and harvesting and/or just flat don't want trees cut on public land.

If and when that happens, I would like to know I can count on the leaders of Iowa's wood industry to stand in support of what we are trying to accomplish on our State Forests. Any information you can provide to policymakers, legislators and the Governor's office on how increased opportunities to purchase standing timber on State Forests helps your business, your employees and your community makes a powerful statement.

I don't need you to do anything specific at the moment except contact me and let me know you are willing to speak on behalf of our intensified management and the benefits it provides or can provide to your business, your employees and your communities. You can contact me via e-mail at [Paul.Tauke@dnr.iowa.gov](mailto:Paul.Tauke@dnr.iowa.gov) or call me at 515/242-6898.

## **State Forest Timber Sales**

The purpose for developing management plans for the State Forests is to ensure that these lands are sustained for future generations and that the mission and core functions for the DNR and Bureau of Forestry are reflected in the management of these lands. These plans reflect the management intentions for the next twenty years based on current knowledge of land capability, inventory data, sound forestry practices, land stewardship, and public demands. The plans will be working documents, and will be revised as needed to address the challenge of managing a forest resource that is constantly changing. By properly managing the forest resource, we can also help provide a sustainable supply of raw material for Iowa's wood industry.

With the recent completion of management plans on the major state forests in Iowa, we would like to provide opportunities for you to take a look at the management work planned for the next several years. The state forest plans can be found at <http://www.iowadnr.gov/forestry/sfplan.html> or you can request a copy of any of the plans on CD or paper by contacting Jeff Goerndt, State Forests Section Chief 515/281-5441 or email me at [Jeff.Goerndt@dnr.iowa.gov](mailto:Jeff.Goerndt@dnr.iowa.gov)

We are also working diligently to improve our timber sale program. By July 1, you will be able to see updated timber sale bid notices, maps of proposed sale areas, and bid results on our timber sale web page at <http://www.iowadnr.gov/forestry/timbersales.html>. All bonded timber buyers will continue to receive bid notices via email or regular mail as well. This year, we plan to send out bid notices early in July and August, so that timber buyers can have the advantage and flexibility of a longer cutting season. We are also exploring options that will allow us to collect a down payment at the contract signing (instead of full payment up front), with the rest due at a later date. It is our hope that these efforts will be helpful to timber buyers in a sluggish market.

## **Workshop Held to Prevent Spread of Emerald Ash Borer in Wisconsin**

*By Jaina Roth, Editorial Assistant, Forest Products Laboratory*

Representatives from both regulatory field staff and firewood producers from eight states convened to learn new developments on implementing heat treatment processes and to address how to safely treat firewood used for interstate commerce. The workshop concluded with an on-site heat treatment demonstration located at Green Thumb Farm in Prairie du Sac, Wisconsin. Funding for the project is provided by the U.S. Forest Service Wood Education and Resource Center.

Several state firewood producers and agencies met in early March at Madison's Forest Products Laboratory (FPL) to learn more about what insects currently fall under state and Federal quarantine regulations, how to become a certified producer, treatment techniques—including heat treatment (HT)—to eliminate pests, and the latest research developments.

JoAnn Cruse, State Plant Health Director from USDA APHIS (Animal and Plant Health Inspection Service), began the presentation and said that in addition to the emerald ash borer (EAB) found in eight states (Michigan, Indiana, Ohio, Massachusetts, Pennsylvania, Illinois, West Virginia, and Wisconsin, with Wisconsin currently the most infested), several beetles, wasps, and the gypsy moth can also travel with firewood, increasing the need for pest quarantines and wood industry regulation.

Cruse says that after May 1, if a firewood consumer does not burn the wood where it is purchased, transit of logs, timber, and firewood will be permitted only if the transportation meets regulation requirements in each restricted area. Moving firewood outside the 50-mile radius increases the likelihood of EAB infestation, as many pests hatch during the adult flight season of April through September.

To slow the movement of EAB, Robert Dahl, Section Chief at the Wisconsin Department of Agriculture, says that to heat-treat firewood at 160°F at the core for 75 minutes still might be the best way to combat pests. Other methods include debarking the wood plus one-half inch, seasoning for two or more years (a regulation only in Wisconsin), or fumigation. “To be a ‘firewood dealer’ means a person who regularly sells or distributes firewood in the state,” Dahl says. The annual certification fee in Wisconsin is \$50.

Scott Myers, an entomologist with APHIS, says the ideal heat treatment measures include both time and temperature. Although it may be easier and cheaper to simply heat-treat longer rather than increasing temperature, his research has proven that 160°F is the temperature required to kill EAB in particular. Using a process called thermal mapping to track the temperature, Myers inserts probes in the center along the length of a piece of firewood. “These temperature data loggers produce thermal mapping read-outs, which can help us determine if a kiln is operating at its proper eradicating ideal,” Myers says. Cold spots in the kiln due to faulty fans, restricted air flow, or faulty sensors could cause failed certifications.

Heat treatment was first used on pallet lumber for overseas transportation and to prevent the spread of foreign invasives, says Rick Bergman, FPL Research Scientist. Treatment of firewood has the same objectives: using heat to kill any living organism as a quarantine treatment for insects.



Xiping Wang, Senior Research Associate from the FPL and the Natural Resources Research Institute (NRRI) at the University of Minnesota-Duluth, concluded the workshop with his presentation about HT options, temperature monitoring, and how thermal verification works. Although the EAB heat treatment standard remains at 160°F, some kilns using hot water might not meet all requirements for successful eradication of the pest. Factors affecting HT include type of energy used, heating temperature and relative humidity factor, and air circulation. Because kiln drying might not raise the internal temperature of wood adequately to kill pests, Wang’s lab experiments have included a mixture of HT methods that include moisture reduction as well. Dry heat compared with wet heat and green compared with seasoned firewood have affected the research that Wang and Bergman have already completed. Temperature monitors using

thermocouples, data loggers that download into a computer, and paperless temperature humidity recorders can be effective ways of ensuring heat treatment is accomplished and properly recorded.

Terry Mace from the Division of Forestry, Wisconsin Department of Natural Resources, moderated. The workshop concluded with a drive to Green Thumb Farm 30 minutes north of Madison to see HT in action.

“The interaction between firewood companies and dealers was excellent,” Mace said. “The finer points of both the rules and the frustrations were getting answered by APHIS. All the major firewood players were present, and the mechanics of heat treatment, as it was demonstrated, really drove home that research needs to come up with lower temperature standards combined with a longer time to help make the EAB heat treatment process more cost efficient.”

A field demonstration will be held at Tomah, Wisconsin, sometime in the spring. A similar web-based workshop is being planned for later this year, and Wang also said new industry cooperators from Illinois and Indiana are being lined up for some out-of-state demonstrations. “While using the kiln as the standard for drying firewood is not new, making kiln-drying an effective process for meeting the heat treatment requirement to combat pests is,” Wang said.

### **Iowa’s Forest land is Increasing**

An update on the condition of Iowa’s forest resource based on Forest Service inventory for 2007 has been published and is available on the web at: <http://www.nrs.fs.fed.us/fia/pubs/?pageno=8>

In summary, the latest FIA data shows Iowa now has over 3 million acres of forest land cover and Iowa’s trees are still growing more volume than what is being harvested. A breakdown of the estimates is included in Table 1 on the next page. This Table breaks Iowa’s forests into 2 categories, “forest land” and “timber land”. The Forest Service defines “forest land” as land that is at least 10% stocked by forest trees of any size, or land formerly having such tree cover, and not currently developed for a non-forest use. The minimum area for classification as forest land is once acre. Forest land includes timberland, reserved forest land, and other forest land. “Timberland” is defined as forest land that is producing or capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment. Timberland excludes reserved forest lands. For a further explanation of FIA definitions and procedures for collecting data please visit (<http://treesearch.fs.fed.us/pubs/20371>)

For your convenience and in case you are not able to access the information, the fact sheet is included in the next 2 pages.



Image credit: Paul Wray, Iowa State University, Bugwood.org

## Iowa's Forest Resources, 2007

This publication provides an overview of forest resource attributes for Iowa based on an annual inventory conducted by the Forest Inventory and Analysis (FIA) program of the U.S. Forest Service, Northern Research Station. These estimates, along with web-posted core tables, are updated annually. For more information please refer to page 4 of this **Table 1.—Annual estimates and sampling errors, Iowa, 2007.**

	Estimate	Sampling error (%)
<b>Forest Land Estimates</b>		
Area (1,000 acres)	3,054	2.2
Number of live trees 1-inch diameter or larger (1,000,000 trees)	1,176	4.0
Biomass of live trees 1-inch diameter or larger (1,000 tons)	118,716	3.7
Net volume of live trees (1,000,000 ft <sup>3</sup> )	4,244	4.5
Annual net growth of live trees (1,000 ft <sup>3</sup> /year)	152,919	9.0
Annual mortality of live trees (1,000 ft <sup>3</sup> /year)	57,310	9.8
Annual harvest removals of live trees (1,000 ft <sup>3</sup> /year)	27,127	24.6
Annual other removals of live trees (1,000 ft <sup>3</sup> /year)	26,400	27.7
<b>Timberland Estimates</b>		
Area (1,000 acres)	2,997	2.3
Number of live trees 1-inch diameter or larger (1,000,000 trees)	1,152	4.1
Biomass of live trees 1-inch diameter or larger (1,000 tons)	114,343	3.6
Net volume of live trees (1,000,000 ft <sup>3</sup> )	4,071	4.3
Net volume of growing-stock trees (1,000,000 ft <sup>3</sup> )	2,986	5.2
Annual net growth of growing-stock trees (1,000 ft <sup>3</sup> /year)	113,577	9.7
Annual mortality of growing-stock trees (1,000 ft <sup>3</sup> /year)	35,576	13.0
Annual harvest removals of growing-stock trees (1,000 ft <sup>3</sup> /year)	19,874	28.0
Annual other removals of growing-stock trees (1,000 ft <sup>3</sup> /year)	47,262	55.7

Note: Sampling errors and error bars shown in the tables and figures in this report represent 68% confidence intervals for the estimated values. Volumes are for 5-inch and larger diameter trees.

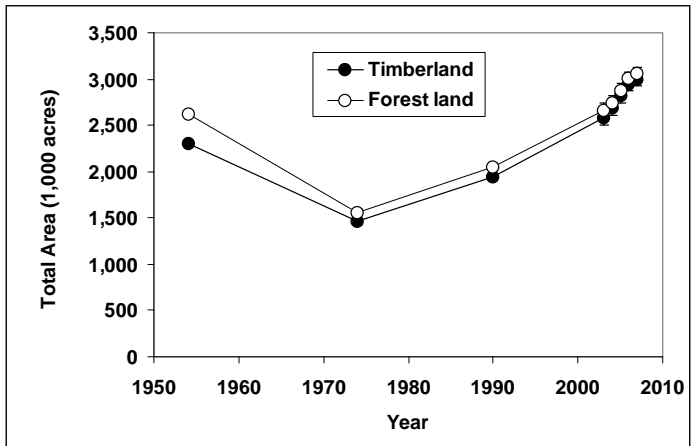


Figure 1.—Area of timberland and forest land in Iowa by year.

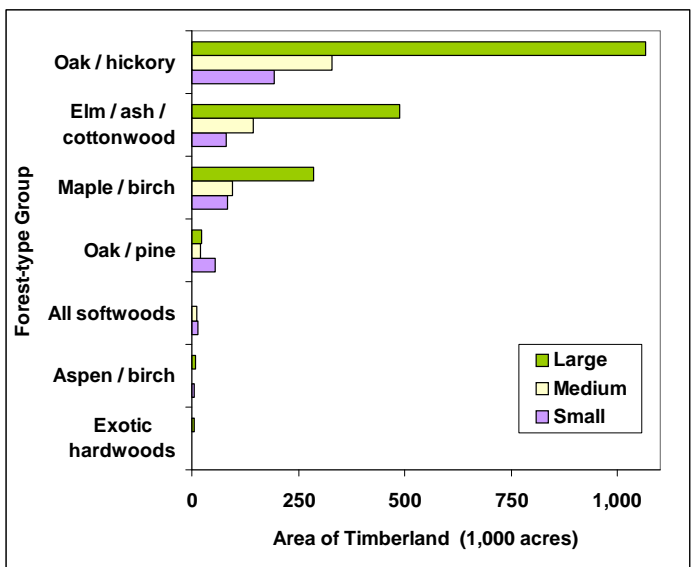
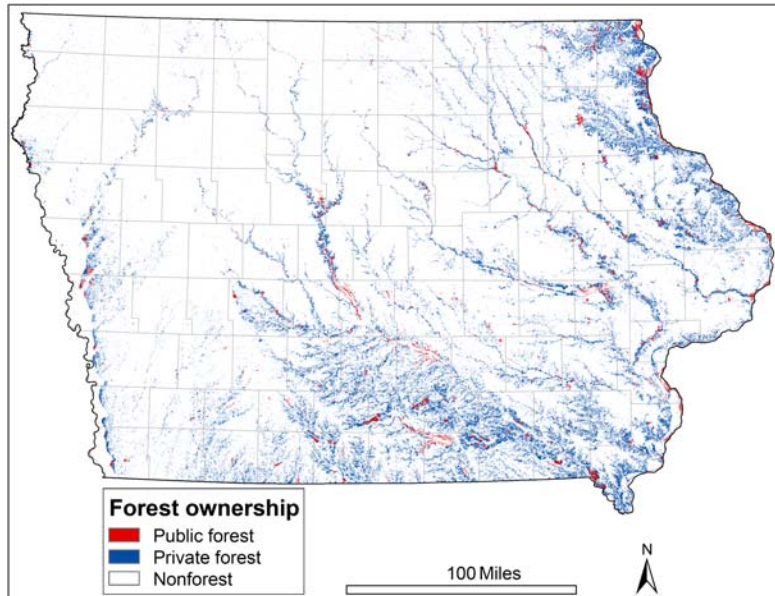


Figure 2.—Area of timberland by top seven forest-type groups and stand-size class, Iowa, 2007.

Note: Large diameter trees are at least 11.0 inches diameter for hardwoods and at least 9.0 inches diameter for softwoods. Medium diameter trees are at least 5.0 inches diameter but smaller than large diameter trees. Small diameter trees are less than 5.0 inches diameter. Additional details are available in USDA Forest Service (2005).

**Table 2.—Top 10 tree species by statewide volume estimates, Iowa, 2007.**

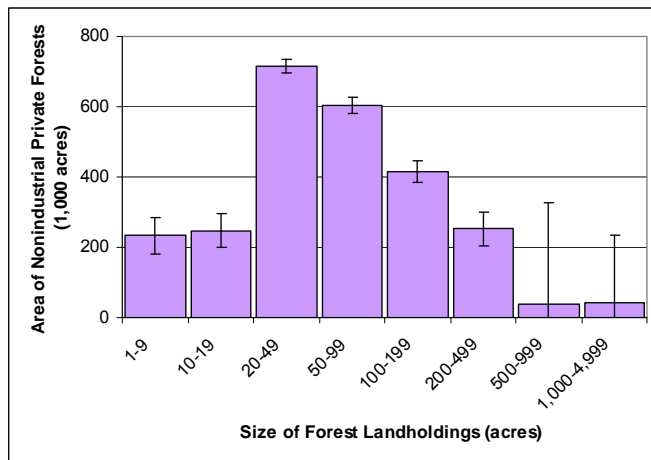
Rank	Species	Volume of live trees on forest land (1,000,000 ft <sup>3</sup> )	Sampling error (%)	Change since 2006 (%)	Volume of sawtimber trees on timberland (1,000,000 board feet)	Sampling error (%)	Change since 2006 (%)
1	Silver maple	516.2	20.2	4.3	1017.8	20.1	-7.2
2	Bur oak	434.6	11.7	-6.7	1015.1	14.7	-7.9
3	Cottonwood	372.2	31.5	2.0	1549.5	31.4	0.1
4	White oak	351.0	13.5	-0.9	1179.1	15.2	-1.1
5	Black walnut	266.9	12.5	2.5	912.2	15.1	2.4
6	Northern red oak	257.1	15.3	-1.2	965.3	17.7	-1.6
7	American elm	245.2	8.0	3.8	359.5	15.6	7.4
8	American basswood	193.0	15.6	0.3	634.8	18.5	-3.5
9	Hackberry	186.5	13.1	0.9	485.6	16.2	1.7
10	Shagbark hickory	159.2	12.0	-2.7	410.0	15.4	-6.5
	Other softwood species	44.8	16.3	-5.9	79.4	23.8	-24.7
	Other hardwood species	1217.2	4.8	2.5	2369.1	7.5	0.7
	<b>All species</b>	<b>4243.9</b>	<b>4.5</b>	<b>0.8</b>	<b>10977.6</b>	<b>6.1</b>	<b>-1.8</b>



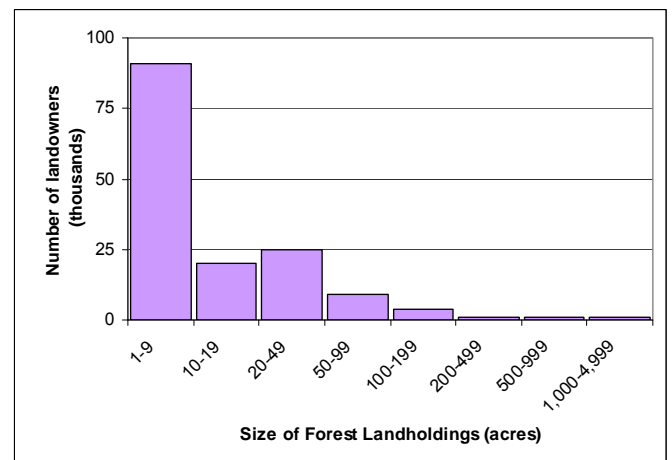
**Figure 3.—Distribution of forest land by public (0.469 million acres) and private (2.586 million acres) owner groups, Iowa.**

Projection: UTM Zone 15N, NAD83.

Data sources: forest/nonforest - U.S. Forest Service, 2001 Forest Type Groups map, (Ruefenacht et al. 2008); ownership - Conservation Biology Institute, Protected Areas Database, 4.5; basemap - ESRI Data & Maps.



**Figure 4.—Area of nonindustrial private forest land by size of forest landholding, Iowa, 2006. Data were derived from Butler (2008).**



**Figure 5.—Number of nonindustrial private forest landowners by size of forest landholding, Iowa, 2006. Data were derived from Butler (2008).**

The data tells a lot about Iowa forests. They are fragmented across the state's agricultural landscape, usually associated with streams or rivers. Iowa's 3 million acres of forest provide many values other than timber including wildlife habitat, recreation, watershed protection and ecological services such as storing carbon or protecting biodiversity.

Timberland is defined as forest land that is capable of growing commercial crops of timber and is not legislatively or administratively restricted from that purpose. That definition applies to 99% of Iowa's forest land. Over 82% of Iowa's forests are privately owned by more than 138,000 forest landowners. Since 1990 the average size of forest land owned by forest landowners has shrunk from an average of 42 acres to 12 acres per owner because the number of landowners has increased from 55,000 in 1990 to over 138,000 now. This makes managing the forest resource at the landscape level difficult because the number of people owning large tracts of continuous forest land is decreasing. The number of sawmills has decreased from 57 to 25 since 2000.

These trends make it difficult for those who harvest timber to remove enough volume to justify their time, moving their equipment and selling the timber for a profit. Forest landowners will have fewer people to sell their timber to in the future, which will reduce the amount of money they can get for their trees. This will have a negative impact on forest landowners and on the forest resource. Without the removal of timber in such a way that promotes regeneration of oak and walnut seedlings, Iowa's forest types will continue to change. The change from an oak-hickory forest type to a maple basswood forest type will change not only the timber available for wood products, but will affect the current wildlife and biodiversity of Iowa's forests.

### **Personnel Changes in the Iowa Forestry Bureau**

In 2008 a couple of personnel changes occurred within the Iowa DNR Forestry Bureau. Paul Tauke has completed a full year as the Bureau Chief for Forestry as well as the State Forester. This allows him to represent Iowa at National meetings addressing forestry issues that will affect Iowa and his position as Bureau Chief allows him the ability to prioritize forestry issues for the department.

Jessica Flatt is the new area forester at Stephens State Forest based out of Chariton. Jessica replaces Jeff Goerndt, who previously was the area forester, when he was promoted to supervisor of state forest lands.

Our new Operation ReLeaf Coordinator is Emma Bruemmer. She is responsible for coordinating and implementing a residential tree distribution program, Operation ReLeaf. This program is funded by Alliant Energy and has added over 40,000 trees into the urban landscape since 2001. She is also responsible for Trees For Kids/Teens, an education and tree planting program for students in Iowa.

**Quick Facts**

- In the U.S., there are about 747,000,000 acres of forested land—that’s about a third of the United States. – *American Forest and Paper Association*
- A healthy, mature tree has about 200,000 leaves. – *Wisconsin Paper Council*
- A wooden pencil can write about 45,000 words or draw a line about 35 miles long. – *The Pencil Pages*
- In the United States, it takes approximately 57 million trees per year just to produce the catalogs that are printed. – *J.W. Morlan’s Wood Facts*

**Websites**

Iowa Department of Natural Resources: [www.iowadnr.gov/forestry/woodprod.html](http://www.iowadnr.gov/forestry/woodprod.html)  
 State of Iowa timber sales: [www.iowadnr.gov/forestry/timbersales.html](http://www.iowadnr.gov/forestry/timbersales.html)  
 Forest Products Laboratory: [www.fpl.fs.fed.us](http://www.fpl.fs.fed.us)  
 Forest Landowners Guide to the Federal Income Tax. USDA Handbook 718:  
[www.timbertax.org/publications/aghandbook/aghandbook.asp](http://www.timbertax.org/publications/aghandbook/aghandbook.asp)

**Comments/ Suggestions?**

Are there issues or topics you would like to see more information on? Do you have websites or other contacts for information that would benefit others within the wood industry in Iowa? If so, please let me know so I can pass along the information in the next newsletter. This newsletter is available on the web at: [www.iowadnr.gov/forestry/woodprod.html](http://www.iowadnr.gov/forestry/woodprod.html)

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**BULLETIN BOARD FOR ADVERTISING**

If you wish to list an ad in the **SUMMER** issue of Iowa Wood Splinters Newsletter, please fill out and return this form by July 19, 2008. There is no cost for placing the ad.

Equipment:    \_\_\_ For Sale    \_\_\_ Wanted                      Forest Products:    \_\_\_ For Sale    \_\_\_ Wanted

Employment:    \_\_\_ For Sale    \_\_\_ Wanted                      Services/Misc:    \_\_\_ For Sale    \_\_\_ Wanted

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

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