



ONE HOUSE, TWO PROJECTS

*Linking sustainable forestry,
green building, affordability*

Showing the Solutions
at the Nation's Capital...

The Sustainable Resource House was displayed from June 23 to July 4 on the National Mall in Washington, D.C., as part of the annual Folklife Festival sponsored by the Smithsonian Institution. The house and other exhibits at the festival commemorated the 100th anniversary of the USDA Forest Service.

Thousands of visitors to our nation's capital saw first hand the link between our forests, our homes, and green building practices in North America when they toured the Sustainable Resource House.

Living the Solutions...

Following the Folklife Festival, the house was dismantled and moved to North Carolina to be donated to the Haywood Habitat for Humanity where it will be reconstructed at Skyland Terrace, Canton, N.C., for a partner family.

Prior to the family moving into the Sustainable Resource House, the house will be open to the general public so everyone can learn about the new technologies and building ecologically sustainable structures.

Construction:

April 26-28, 2006

Open House:

April 29, 2006 from 2 to 5 p.m.

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ABOUT US

A Nation's Need Identified... Partnerships Built... Solutions Demonstrated

The 1,200 square foot wood Sustainable Resource House was built as a joint project of wood products associations and manufacturers and the USDA Forest Service, Forest Products Laboratory (FPL), to demonstrate the link between sustainable forestry, modern efficient wood products and green building.

"We wanted to build a house that demonstrates to our nation's leaders and the public how innovative building products and new construction concepts are enabling us to construct homes that make optimum use of our valuable forest resources and provide comfortable, energy-efficient living spaces," said Dennis Hardman, president of APA – The Engineered Wood Association.

Both the USDA Forest Service and the softwood plywood industry are marking their 100th anniversaries this year. "A slow but broad shift in thinking was taking place a century ago. It became increasingly clear that unless the country renewed and managed its forests, and made better use of them through innovative products, we would eventually destroy one of our most precious natural resources," said John Murphy, immediate past chairman of APA.

"Today, 100 years later, as a result of that shift in thinking, our country remains blessed with bountiful, renewable forest resources. Our nation is benefiting today from the rise of a new way of thinking about how to build our homes, our offices, our stores, and other structures. The green building movement, by seeking to quantify the environmental merits of construction methods and materials, provides an important new tool for making our society truly sustainable...today for us and tomorrow for our children and grandchildren," Murphy continued.

"Sustainable forestry, modern wood processing, and green building methods are natural partners that together can make—and are making—an enormous contribution to the wise use of resources and to a higher standard of living."

"The Forest Product Laboratory has been involved in development of engineered wood products since it began in Wisconsin in 1910," said Mike

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SPONSORS

- APA - The Engineered Wood Association
- Haywood Community College
- Haywood Habitat for Humanity
- Southern Pine Council
- Structural Insulated Panel Association
- USDA Forest Service, Forest Products Laboratory

CONTRIBUTORS

- Ainsworth Lumber Company
- Alamco Wood Products Inc.
- Andersen Windows
- Blue Ridge Atlantic Enterprises
- Blue Ridge Paper Products, Inc.
- Carolina Tractor
- Department of Transportation
- F & F Trucking
- Georgia-Pacific Corporation
- Scott Goldsmith
- Haywood Crane Service
- Hertz Equipment Rental
- Hi-Tech Construction Products
- Insulspan BASF
- Insulspan, PanelWrights, LLC
- LP Corporation
- Metal Roofing Alliance
- Dickinson A. Reed
- Sechser Precision Surveying & Mapping, PLLC
- Southern Pine Council
- Superior Walls of North Carolina
- Terminix
- Triad Drillers

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Ritter, assistant director of FPL. "We remain committed to developing sustainable wood products and encouraging research that increases our forests' health and decreases the chance of a catastrophic forest fire."

Murphy noted how the USDA Forest Service and the wood product manufacturing industry have worked together over the years to make better use of the forest resource and develop products that are both sustainable and structurally superior. He said the USDA Forest Products Laboratory has played a key role in research leading to many of the engineered wood products used in the construction of the Sustainable Resource House. The cooperative industry project was sponsored by APA, FPL, the Structural Insulated Panel Association, and the Southern Pine Council. The house was prefabricated and assembled on-site by PanelWrights, LLC, a West Virginia-based structural insulated panel builder. The Haywood affiliate of Habitat for Humanity International is coordinating the construction in North Carolina.

A number of factors contribute to the sustainability of the engineered wood products used in the demonstration house. The products are manufactured from fast-growing, underutilized wood species grown in carefully managed, renewable forests. Through modern manufacturing technologies, products such as plywood, oriented strand board, I-joists, glued laminated beams and finger-jointed lumber maximize what was once considered less desirable wood fiber to make strong, consistent building materials.

Additionally, the manufacturing process for structural wood products is more energy efficient than the manufacturing process of any other structural building material. Compared to the amount of energy it takes to produce one ton of wood, it takes 5 times more energy for cement, 14 times more for glass, and 24 times more for steel.

Wood also performs well over the life of the building, helping to maximize long-term benefits of a renewable resource. In scientific circles, life cycle assessment is emerging as the accepted way to determine the true environmental impact of any product. The life cycle assessment provides a "cradle to grave" measurement of a product's environmental impacts from raw material extraction and manufacture through distribution, use, maintenance, and disposal.

The life cycle assessment studies show that wood is better for the environment than steel or concrete in terms of embodied energy, global warming potential, air emissions, water emissions, and solid waste production.

To demonstrate that wise use of resources, the single-family dwelling was constructed with wood I-joists, tongue-and-groove plywood floor sheathing, structural insulated panels that are manufactured with oriented strand board, laminated veneer lumber, glulam and engineered wood lap siding. The interior walls were framed with finger-jointed southern pine lumber. The front porch, rear deck, and accessibility ramp were constructed with southern pine treated decking and lumber.