



# NEWS RELEASE

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## FOR IMMEDIATE RELEASE

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### "New" floor made from 60-year-old army barracks addresses many problems

Madison, Wis.— The newest addition to the research-demonstration house at the Forest Products Laboratory (FPL) in Madison is also the oldest.

FPL's carpenters recently installed a wood floor in one of the house's four bedrooms using boards that had served for some 60 years as exterior siding on a WW II-era barracks building on the Army's Ft. Ord base in California.

"The floor is significant because it provides one answer to the question of what to do with the millions of board feet of high-quality lumber that could be recovered from buildings scheduled for demolition on dozens of military bases around the country," says Dr. Robert Falk, research engineer at FPL, a unit of the USDA Forest Service. Falk has been researching ways to make use of wood from such buildings.

The standard procedure for removing unneeded buildings is to demolish them and dispose of the material in landfills.

"Demolishing and landfilling the old buildings has drawbacks," Falk said. "First, most of these military buildings were constructed during the decades of old-growth timber harvest and contain high-quality wood largely unavailable from any other source. It is a huge waste to simply throw away this lumber. Also, the reuse of these materials helps conserve our natural resources, maintain carbon sequestration, and ease harvesting pressure on our existing forest resource.

And sending material to landfills is expensive. According to Army researchers, a typical two-story barracks produces about 400 tons of scrap, and tipping fees at a landfill can run from \$30 to \$90 per ton, not counting transportation.

In line with the Forest Service's mission to conserve forest resources and encourage wise use, Falk has been working with the Army, Habitat for Humanity, the Environmental Protection Agency and other organizations to explore the possibility of "deconstructing" unwanted buildings. In deconstruction, a building is dismantled in such a way as to preserve the lumber and other components for reuse. Without deconstruction, thousands of unwanted buildings on old military bases, with millions of board feet of valuable old-growth lumber, would end up in landfills.

Falk seeks to encourage deconstruction by finding "high value" uses for the reclaimed lumber, thereby making it possible to recoup some of the costs of deconstruction.

"Flooring is certainly an appropriate use," Falk said. "Though softwood lumber like Douglas-fir or southern pine is not as hard as other flooring woods, such as oak or maple, the old Douglas-fir being evaluated as flooring is tight-grained and knot-free, making it suitable for low-traffic areas. The flooring exhibits the pinkish hue of Douglas-fir and an aged patina. Even the old nail holes add visual interest."

New flooring of this quality would cost several dollars per square foot

"The grain pattern is characteristic of 'old-growth' trees that were several hundred years old when cut," Falk said. Such trees are no longer harvested from the National Forests.

In addition to his work on flooring, Falk is currently working on developing standards for grading used lumber for structural use.

The flooring was made out of the barracks' exterior siding boards. The layers of old paint were removed, and the boards were machined to a standard tongue-and-groove flooring profile of five-eighths inch thick and 3 and 1/8 inches wide.

Thousands of obsolete wood buildings on scores of military installations, including Badger Army Ammunition Plant near Baraboo, Wis., have been scheduled to be demolished in the next few years. Most of the buildings were built in the early 1940s, as part of the military effort during World War II, using lumber harvested from the nation's forests. The buildings could provide as much as 200 million board feet of lumber.

The research-demonstration house was built two years ago in a cooperative effort by FPL, APA-The Engineered Wood Association, and the Southern Pine Council, to demonstrate proper building techniques and many new building technologies. The house continues to be used for research by FPL.

Other floors in the house include southern pine from managed tree plantations, small-diameter Douglas-fir made from "suppressed growth" trees, and in the kitchen, maple hardwood.

The floor can be seen as part of the regularly scheduled public tours of the house, at 2 p.m., Monday through Thursday. For information about the public tours, or to schedule a special group tour, contact FPL at 608-231-9200.

The USDA Forest Service Forest Products Laboratory was established in 1910 in Madison, Wis., with the mission to conserve and extend the country's wood resources. Today, FPL's research scientists work with academic and industrial researchers and other government agencies in exploring ways to promote healthy forests and clean water, and improve papermaking and recycling processes. Information is available at FPL's Web site: [www.fpl.fs.fed.us](http://www.fpl.fs.fed.us). Through FPL's Advanced Housing Research Center, ([www.fpl.fs.fed.us/ahrc/](http://www.fpl.fs.fed.us/ahrc/)), researchers also work to improve homebuilding technologies and materials.

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