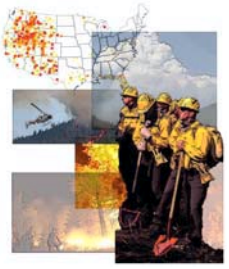
National Fire Plan

Utilizing Small Diameter Materials and Old World Skills

Oregon 2002



By PAUL FATTIG, *Mail Tribune*

Pioneers probably wouldn't have paid much mind to the 150-foot buck and rail fence installed Tuesday afternoon to keep cattle away from a mountain spring. After all, that's the way fences have been built since the beginning. But Jocko Burks, operations manager for Forest Concepts LLC based in Federal Way, Wash., believes this demonstration buck and rail fence is on the cutting edge of technology needed to use small logs thinned from overstocked public lands.

The fence represents jobs that could spring up when forestlands are thinned to reduce the threat of catastrophic wildfires, he said. All that is needed is a little woodworking skill, a work space and a few tools to build the fence locked together by wooden mortise and tenon joints, Burks said. "A garage and a drill press — it's not rocket science," Burks said.

Patrick Ray, left, and Justin Maschhoff demonstrate the assembly of a buck and rail fence designed to make good use out of small-diameter logs thinned from forestlands.

Mail Tribune / Roy Musitelli

"With all the thinning that needs to be done, this would be an excellent cottage industry to employ some local people," said Blair Moody, a forester with the Bureau of Land Management's Medford District.

Installed in the Burnt Creek drainage some 35 miles east of Medford on the Bureau of Land Management's Medford District, the buck and rail fence is one of the few made of wood connectors since iron nails were invented, officials said. The firm designs and develops fabrication procedures for environmental restoration and watershed protection projects using small-diameter logs. It was contracted last year by Uncle Sam at a cost of $29,670 to devise the fence. The firm provided $10,000 in time, equipment and travel in matching support for the National Fire Plan funding.

"A lot of research was done to come up with a technical design that made this fence wildlife friendly," said Justin Maschhoff, a biologist for the firm. The top rail height allows deer and elk to jump over the fence while cattle cannot. Other smaller creatures can easily slip under the lower rails or between the rails, he said.

While the specifics are still being hashed out on where and how forest thinning should occur, many agree that public forestlands in the region are overstocked and ripe for catastrophic fires. Blair Moody, a forester with the BLM's Medford District and the agency's project leader, believes the fence reflects the job potential using

small-diameter wood products. "With all the thinning that needs to be done, this would be an excellent cottage industry to employ some local people," Moody said.

A barbed wire fence costs about $10,000 a mile, according to the BLM. It's unknown what the final cost would be for a mile of the buck and rail fence. But Burks noted there is a value in putting local people to work, in using material previously thrown aside and not using materials made overseas. The wood fence also may require less maintenance than barbed wire, he said. "This is a fence that works," said Burks, a forester by training. "And we think the market is there. But we don't know yet. This is all brand new."
He suggested Southwestern Oregon could become a small-wood manufacturing center, perhaps in conjunction with a post and pole supplier or a furniture maker. For instance, if his firm were to start manufacturing the product locally, it would be worthwhile for local workers to log the small material, he said. "If the forester doing the thinning pulled the material to the roadside, we would pay about $1.10 for 12-foot rails," Burks said. "If they bring them to us in Medford, we would pay $1.85 a rail." That amounts to about five times the current pulp price, he estimated. But the small logs would have to meet the firm's specifications: bark on, no limbs and cut to length. The conifer logs used in the fence are from 3 to 7 inches in diameter on the smallest end. The rails are 12 feet long. "If you set it up right, people can afford to come out and pull this stuff out of the woods," he said. Steve Thorson, the firm's director of business development, agreed. "We think we could move into small communities near fires here and use your local timber," he said, noting that a hundred truckloads would put 20 people to work.

Using the small logs, the firm also developed what it calls "flow-check erosion controls" which can be used in seasonal drainages to reduce erosion following a wildfire. Straw bales used to stabilize eroded ground have the inherent problem of introducing noxious weeds to the environment, Thorson said. "These erosion checks are biodegradable," he said. "In seven to 10 years, they become part of the landscape." "With a surplus of materials coming out of the woods, we need to find things we can make out of them," Maschhoff said. "If you just flood the pulp market with those materials, the prices will fall through the floor. "By developing new products, we can find a new market for small diameter timber."

For additional information, see: www.elwdsystems.com.
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