



Roger Rowell, USDA Forest Service, Forest Products Laboratory, Madison, Wis. Presents:

Water Quality Management and Erosion Control Maintained with Forest and Agricultural Fibers

Cocopai Resource Conservation and Development (RC&D) is hosting a presentation to discuss new technology that uses forest residues and related agricultural fibers for water quality management and erosion control.

According to Environmental Protection Agency estimates, more than 90 percent of Americans live within 10 miles of an impaired body of water, and filtering contaminants from water is both challenging and expensive.

Dr. Roger Rowell from the USDA Forest Service's Forest Products Laboratory in Madison, Wis. will present his research that provides opportunity for economic development by turning the overabundance of small diameter trees into filters to clean contaminated waters.

This filtering technology has been 80 percent effective in removing heavy metals from acid mine run-off. The process could also assist municipalities with storm water run-off management. The filters effectively remove oils, sediment, pesticides and other contaminants. The process has also proven effective at a reasonable cost in cleaning up agricultural run-off.

About 80% of the fresh water in the US originates on the 650 million acres of forestlands. The 192 million acres of National Forest and Grasslands are the largest single source of that water and the headwaters of many large watersheds originate in the National Forests.

"Waste" forest and agricultural resources can be used to produce filters and geotextiles to improve water quality and minimize soil loss. Filtering contaminants from water is both challenging and expensive. Global spending on filtration is estimated to grow from a \$17 billion business in 1998 to \$75 billion in 2020. And for problems such as parking lot, agriculture or acid mine run-off, the costs of filtering water can be prohibitive.

That's where Forest Products Laboratory researchers step in. "We've got a system that not only is effective at

reducing pollutants, but it does so cheaply using readily available local species," says Dr. Rowell, FPL project leader. "Better yet, we can use problem species that need to be thinned to help solve our fire problem." Rowell says Juniper is a great example.

The system also works well for mine site water filtering. In 1999, the Environmental Protection Agency (EPA) estimated that 3,400 public drinking water systems were located in watersheds contained in National Forests and about 60 million people lived in the communities served by that drinking water.

Dr. Rowell will present:

- *The best filter media
- *The best filter design
- *What we are trying to remove
- *How much we can capture
- *What we do with it after capture

Wednesday, Feb. 9, 1:30 p.m.
Cottonwood Public Safety Building
199 South 6th Street
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