RESEARCH in Progress

Coalition for Advanced Wood Structures
a university, industry, government partnership

Characterizing Product Potential from Ecosystem Restoration Activities

Non-traditional materials removed from forest lands as a result of forest restoration activities have the potential to supply feedstock for the manufacture of sustainable building material.

Background

Ecosystem restoration of forested areas represents a shift from traditional, commercial harvesting of timber on public lands. Rather than managing primarily for production of marketable timber, restoration activities are often intended to improve wildlife habitat or water quality, reduce fire risk due to excessive fuels, and improve overall forest health. Finding uses for the woody materials removed during restoration activities can contribute to the economic well-being of rural communities, support small businesses, and provide sustainable, renewable materials for structural applications.

Figure 1. Typical small-diameter lodgepole pine stand in western Montana.

Objective

The overall objective of this research is to characterize the unique physical, mechanical, and chemical properties of woody biomass likely to come from ecosystem restoration activities on public forested land surrounding rural communities (Figure 1). This information will be used to asses the potential for the production of various products from this resource (Figure 2).

Approach

Initial efforts will be broadly based and will provide direction for future focused studies. The current effort has three parts:

- Identify critical forested areas where restoration activities are planned or desired
- Assess physical characteristics of categories of woody biomass that are expected to be removed via sampling and laboratory testing
- Create maps of forested areas that highlight specific wood quality characteristics that effect utilization

Expected Outcomes

This research will provide an assessment of the quality and physical characteristics of woody materials resulting from ecosystem restoration and fuel reduction activities. This information will help identify promising new end uses for this woody material.

Timeline

Sampling for this study is expected to begin in the spring of 2007. Testing and analysis are expected to be completed by early 2008. Reports of the studies should be available by summer 2008.

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Figure 2. Some potential products from forest restoration activities.

Cooperators

Discussions with potential cooperators are in progress to identify research areas of mutual interest. In addition to the University of Idaho and the USDA Forest Service, Forest Products Laboratory, likely additional cooperators include other Forest Service Research units and state Department of Natural Resource personnel in Idaho and Montana. Cooperators in the business sector will be included if appropriate.

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