

## Characterization of the At-Risk Timber Resource in the Intermountain West

Ecosystem restoration of forested areas represents a shift from traditional, commercial harvesting of timber on public lands. Restoration activities are expected to result in sustainable amounts of biomaterial that could be used as feedstock for the manufacture of sustainable building materials.

### Background

Creating the highest value for woody material removed during forest restoration activities depends on gaining fundamental knowledge about the various quality traits of this material as it relates to specific end uses. In addition, tools and processes to sort material for specific end uses need to be developed for effective and efficient utilization opportunities.

### Objective

The overall purpose of this research is to characterize the physical, mechanical, and chemical properties and attributes of at-risk species in the Intermountain West with respect to utilization for applications in housing and other structural uses.

Specific objectives are to

- develop new tools for rapid assessment of standing trees and felled logs to classify by key quality parameters;

- define fundamental physical, mechanical, and chemical characteristics of at-risk species in the Intermountain West; and



Assessing the quality of material to be removed during restoration activities.

- develop products that are suitable for housing and other structural uses from at-risk species in the Intermountain West.

### Approach

The current study has two parts:

- Assess the physical and chemical characteristics of the types of woody biomass that are expected to be removed from ecosystem restoration sites in the Intermountain West.
- Relate tree physiology at the cellular level to factors that influence wood quality.

### Expected Outcomes

- Knowledge of the interrelationships between wood chemistry and other fundamental wood properties that impact product quality attributes
- Tools to assess and classify woody biomass for highest yield and value

### Timeline

Sampling for this study will begin in spring 2008. Testing is expected to be completed by late 2008 or early



**Laboratory testing of composite materials made from small-diameter material.**

2009. Published reports should be available by late 2009.

### **Cooperators**

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