Ecological Restoration Institute

Fact Sheet: Impacts and Implications of the Woody Biomass Utilization Grant Program in Eastern Arizona

April 2014

Impacts and Implications of the Woody Biomass Utilization Grant Program in Eastern Arizona

By Anne Mottek-Lucas, Yeon-Su Kim, Emily Jane Davis, Cassandra Moseley, Max Nielsen-Pincus, and Ted Bilek

Introduction

Utilizing woody biomass — small-diameter material and low-valued trees removed from forest restoration activities — on public lands may help reduce agency costs, enhance community wildfire protection, and create employment and economic activity. Yet small businesses adjacent to public land often lack the capacity to harvest and utilize biomass. Businesses face challenges such as limited access to capital and markets, technical assistance, and inconsistent material supply. From 2005–2010, the USDA Forest Service's Woody Biomass Utilization Grant (Woody BUG) program provided resources to address these barriers. We evaluated and compared the impacts of this program in eastern Oregon and in eastern Arizona. Here we summarize the findings from eastern Arizona.

Approach

We studied grants awarded between 2005 and 2010 in the White Mountains region of eastern Arizona. We employed mixed methods including document analysis, semi-structured interviews, and economic impact analysis and modeling using IMPLAN.

Photo courtesy Patrick Rappold, AZ State Forestry Division

Research Findings

This relatively small ($5 million authorized nationwide annually) program contributed to regional biomass processing capacity, despite challenging market and economic conditions brought about by the recession. The Woody BUG program was unique in that it allowed a land management agency to fund equipment acquisition, fill gaps in regional industry, and support networks of technical assistance and learning. Outcomes such as increased acres treated, reduced costs per acre, and green tons removed were less discernible. Specifically, we found that:

The Woody BUG program increased business capacity

- Many businesses expanded and diversified their product lines to utilize different types of biomass through integrated strategies that steered away from products reliant on the depressed housing industry.
- The Woody BUG program expanded sawmill capacity in the region, which was important to industry success in the area because increased processing of material helped maintain competitive prices for manufactured wood products.
- The program helped build a network of processing facilities and services that several biomass businesses shared, which improved these businesses' efficiencies; thus, creating a "microcosm" that had developed valuable networks and created a balanced system.
- Minimizing haul distances to processing infrastructure reduced associated costs.

In-state economic impacts arose from use of matching funds for labor and services (Table 1)

Grantees lacked adequate and reliable supply from public lands

Despite the award of the first Forest Service 10-year stewardship contract in the nation, grantees still experienced difficulties due to lack of biomass supply. This led to limitations in production, delays in promoting their new product lines, inability to fill backlogs of orders, and difficulty in planning sawmill production. There were several key challenges:

- Operationalization of the contracting mechanism deterred opportunities for competitive bids, flexibility of supply, and competitive pricing of both raw material and finished products.
- Timely salvage logging from the 2011 Wallow Fire.
- Lack of agency capacity and funding on a local level.

Table 1. Woody Biomass Utilization Grants in eastern Arizona, 2005–2010.

	Eastern Arizona
Number of grants*	12
Total grant funds	$2.6 million
Total matching funds	$4.9 million
Percent of total funds spent on equipment	54
Total one-time spending impacts	
Jobs created or retained	45
Wages generated	$3.7 million
Economic activity generated	$6.6 million
Tax revenues	$0.93 million

**12 awarded; 2 unsuccessful grants were eliminated for economic analysis*

POLICY IMPLICATIONS

The clearest accomplishments of the Woody BUG program have been its significant contributions to the revival of eastern Arizona's biomass processing capacity and associated rural economic development, which occurred despite challenging markets and economic conditions.

Future policy and programs designed to encourage woody biomass utilization can be further improved by:

- Direct intermediary assistance both before and during the program;
- Assessing the needs of the regional forest products industry as new programs/initiatives are conceptualized that include initiatives that further support increasing regional biomass utilization capacity;
- Consistent involvement of the Forest Service and deliberate, coordinated investment in agency capacity at local levels (e.g., effective implementation and coordination of stewardship contracts and grants, and understanding of local businesses' needs);
- Matching business demand for raw material supply with investment in agency capacity to complete planning, once Forest Service decisions are made regarding the number and types of treatments;
- Assuring close oversight of the raw material stream, from the contractor(s) through the distribution and utilization channels; and
- Monitoring grant impacts with information grant recipients readily know.

This Fact Sheet summarizes information from the following publication*:

Davis, E.J., A.M. Lucas, Y.S. Kim, C. Moseley, M. Nielsen-Pincus, T. Bilek. 2014. The Impacts of the Woody Biomass Utilization Program in Eastern Oregon and Eastern Arizona. Ecosystem Workforce Program Working Paper Number 46. Eugene, Oregon: Institute for a Sustainable Environment, University of Oregon. http://library.eri.nau.edu/gsdl/collect/erilibra/index/assoc/D2014015.dir/doc.pdf

**This research was supported by the USDA Forest Service's Forest Products Laboratory and the Sustainable Northwest/U.S. Endowment for Forestry and Communities.*

Ecosystem Workforce Program

UNIVERSITY OF OREGON

Contact

Dr. Yeon-Su Kim, Yeon-Su.Kim@nau.edu

This research was funded by a grant from the USDA Forest Service

NORTHERN ARIZONA UNIVERSITY
Ecological Restoration Institute

FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE