Hazardous Fuels Reduction and Forest Biomass Utilization: A Nationwide Analysis

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Characterizing Lessons from Federal Biomass Removal Projects

STUDY OVERVIEW

This project investigates 10 case studies nationwide with an emphasis on efforts to reduce hazardous fuels through forest biomass utilization. Cases were selected based on fuel reduction needs in regions, level of existing infrastructure, community partnerships present, and in which there was a diversity of federal, state and tribal involvement.

Uncertainty exists regarding the characteristics necessary to stimulate biomass utilization, effectiveness of agency and local efforts, and the role of partnerships in building the types of capacity necessary to expedite biomass removal. The challenges, while similar in some areas, varies considerably across the country. The approaches taken by federal agencies, states, Tribes, local governments, industry associations, NGOs, community groups, and citizens working together to accomplish biomass utilization provides lessons for addressing those challenges. This information has be collected in each of the 10 cases with particular emphasis on the strategies and approaches taken for project planning and implementation, operations, and efforts to build industry, community, and institutional capacity.

Preliminary results are presented here with final results expected in the spring of 2009.

OBJECTIVES

1. Examine the local social and physical context in which biomass utilization strategies have developed in different regions of the country with varied resources and wildfire risks.
2. Identify the types of utilization activities accomplished focusing on agency, industry, and community factors contributing to project accomplishment.
3. Characterize key challenges to biomass utilization experienced and the strategies employed to overcome them and achieve local objectives.
4. Assess the roles of partnerships in facilitating hazardous fuel reduction planning, implementation, and capacity building for biomass utilization.
5. Capture and share “lessons” about the approaches used to implement biomass removal projects and how they accommodate utilization objectives.

METHODOLOGY

Face-to-face interviews were carried out using field based semi-structured interviews with open ended questions.

Key questions were enquired from about 150 land managers (federal, state, Tribal, county), industry representatives, and community stakeholders) involved in biomass utilization.

The study findings compare and contrast trends in local challenges, opportunities, strategies and policy instruments employed. Specific approaches and strategies are reported.

Approaches to Increase Biomass Utilization (Preliminary Findings)

Northern Colorado Front Range

- *Local efforts in northern Colorado have promoted strategies that enable site accessibility and reduce transportation costs.*
- *Colorado State Parks has received a USDA Forest Service, Forest Products Lab grant to establish wood collection sites in proximity to private land to facilitate the collection of forest thinnings.*
- *The Front Range Fuels Treatment Partnership is promoting awareness for wildfire and biomass utilization.*
- *The Colorado State Forest Service has been a catalyst for emerging ideas and strategies through the Wood Utilization and Marketing Program by providing technical expertise, and helping to expand the Colorado Proud™ label to include forest products and create the Colorado Forest Products program (http://www.coloradoforestproducts.org/).*

Bitterroot Valley, Montana

- *Utilization of small diameter trees is promoted through the expansion of small scale industries and promotion of the Fuels for Schools and Beyond program in which public schools are retrofitted with biomass boilers for heating and electricity.*
- *New partnerships are developing among community stakeholders to raise awareness of biomass utilization practices, such as the use of roundwood engineering for the Darby Library.*
- *The emergence of partnerships and initiatives, such as the Small Wood Utilization Network, provide real-time information on new business enterprises, buyers and sellers of biomass, and provides up-to-date technical information.*
- *Utilization initiatives also target large-scale users such as Smurfit Stone Inc.*
- *Interest in biomass utilization is encouraged through the Beaverhead-Deerlodge Partnership that promotes collaboration among industries and environmental groups to reduce litigation, promote forest stewardship and reduce beetle infestations.*

Central Oregon

- *The Central Oregon Partnership for Wildfire Risk Reduction encourages expansion of biomass utilization through efforts to enhance technical knowledge, provide accurate supply estimates and contract training.*
- *Central Oregon has exemplified efforts in diversifying biomass industries, such as animal bedding, with targeted state incentives coupled with federal programs.*
- *In the face of the growing danger of forest fires and concerns about forest health, partnerships have been forged among environmental, industry, and federal agencies that promotes biomass utilization as the unifying objective.*

Southern Oregon

- *The USDA Forest Service and Medford District of the Bureau of Land Management are increasingly working together in pursuit of biomass utilization and recently supported a joint Biomass Coordinator position.*
- *The State of Oregon has passed a series of legislation aimed at invigorating investment in biomass utilization, including the Renewable Fuels Standard and the Business Energy Tax Credit.*
- *The Applegate Partnership is collaborating with industry representatives, conservation groups, government agencies, and community residents to promote expansion of biomass energy production from fuels reduction treatments in the area.*
- *The Lomakatsi Restoration Group provides forest restoration training and promotes value-added products from hazardous fuels reduction treatments.*

Trinity Mountains, California

- *Increasing the expansion of small scale industries, for example, exploring the development of biomass related products like wood pellets and biomass energy from the material harvested of the National Forest.*
- *Partners in Weaverville, CA have developed the Trinity County Fire Safe Council to promote a countywide strategic forest protection plan to encourage alternatives to the pile-and-burn practices of small diameter trees and brush.*
- *Community groups in Weaverville, CA are working with the Bureau of Land Management and the Trinity County Resource Conservation District to establish the Weaverville Community Forest. The result has been the development and authorization of a 10- year Stewardship Contract aimed at protecting aesthetic values through mechanical thinning and biomass utilization.*

Southwest Colorado

- *The expansion of markets for firewood represents one of the few areas where utilization has been on-going and consistent.*
- *New interest in biomass utilization has lead to the emergence of new enterprises with plans to utilize fuels reduction material, however the need for a market based infrastructure is key to their development.*
- *Building on relationships developed in the aftermath of the Missionary Ridge Complex Fire, local partners are working together to identify and address utilization obstacles, including willingness to adapt to agency constraints and seeking ways to procure a consistent supply of biomass.*

Southern New Mexico

- *The Village of Ruidoso assesses property taxes to create incentive to reduce hazardous fuels on private property. The revenue generated is used to pay for the removal of biomass, which is utilized by a local business for landscape mulch.*
- *A Stewardship contract has been implemented by the Mescalero Apache Tribe in coordination with the Lincoln National Forest aimed at reducing wildfire risk along stretches of the forest boundary by coordinating access.*
- *The Mescalero Apache Tribe has completed a series of feasibility studies to identify biomass availability.*
- *The Greater Ruidoso Area Wildland-Urban Interface Working Group brings together local community, agency, tribal, and industry stakeholders to prioritize and implement fuels reduction projects, and strategize ways to increase biomass utilization.*

Coastal South Carolina

- *A Coordinated Resource Offering Protocol (CROP) analysis was conducted for the 18-county region to project the volume of biomass that could be removed over time by species, size class, location, and land owner type*
- *South Carolina Forestry Association, South Carolina Forestry Commission, and the USDA Forest Service work closely to promote the role of biomass utilization for forest restoration and community development.*
- *There exist multiple partnerships among area universities, agencies, and the forest products industry to develop utilization technologies including development of the torrefaction process for liquid biofuels production.*
- *The South Carolina Energy Office is working with the South Carolina Biomass Council to craft legislation to encourage the development of biomass energy and bioproducts.*

Green Mountains, Vermont

- *The state is encouraging integrated community scale initiatives that combine biomass utilization with other forest management goals such as aesthetics, wildlife protection, and diversifies forest products manufacturing.*
- *The Biomass Resource Energy Center has been working in conjunction with state agencies and industry representatives to assess the availability of forest biomass on area public and private lands.*
- *Northern Forest Biomass Energy Initiative is investigating the combined biomass resource potential from the states of Maine, New Hampshire, Vermont and New York to provide an integrate resource for sustainable renewable energy.*
- *By accessing resources from the Vermont Clean Energy Development Fund and the Department of Education, nearly 25 percent of Vermont schools and industrial facilities have been converted to wood-fire boilers to provide thermal heating.*

Northeast Minnesota

- *The Minnesota Forest Resources Council, University of Minnesota, Minnesota Forest Industries, county land commissioners, and conservation groups worked together to develop the first forest biomass harvesting guidelines in the United States.*
- *The Minnesota Loggers Education Program offers biomass harvesting workshops to loggers entering this emerging filed.*
- *The USDA Forest Service has invested in a feasibility study that assessed the cost of biomass removal from the Superior National Forest instead of the conventional pile and burn.*
- *Forest scientists are seeking to identify the volume of biomass that is available for utilization by quantifying the environmental, economic, and social parameters that affects project feasibility for different product markets.*

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