Harvesting Biomass to Meet Multiple Objectives

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Program Outline
- Introduction
- Overview of the BUG Project
- Project Objectives
- Project Activities
- Harvest Sites and Methods
- Next Steps

Introduction
- Institute for Agriculture and Trade Policy
  - International NGO founded in 1986
  - Promotes resilient family farms, rural communities and ecosystems around the world through research and education, science and technology, and advocacy.

Introduction
- Community Forestry Resource Center
  - Established in 1998 by the Institute for Agriculture & Trade Policy
  - Promotes responsible forest management by encouraging the long-term health and prosperity of small, privately-owned woodlots, their owners and their communities
Overview of BUG Project

- Woody Biomass Utilization Grants
  - Program of USDA Forest Service
  - Aim is to create markets for small-diameter and low-grade material from fuel reduction activities

Partners & Collaborators
- CFRC
- U.S. Forest Service
- Laurentian Energy Authority
- Forest Management Systems
- University of Minnesota
- University of Wisconsin, Steven’s Point

Project Objectives
- Address barriers hindering removal of woody biomass from the Superior National Forest
  - Barrier 1: Logger unfamiliarity with equipment, operating conditions, productivity and cost

Project Outcomes
- Job Creation
  - Logging, trucking
  - Local energy source
- Ecological Improvement
  - Carbon neutral
  - Reduced emissions
- Fuel Reduction
- Ecosystem Goals
  - Timber stand improvement
- Established standards for sustainable biomass removal
Methods

- 12 test biomass harvests
  - High-priority fuel reduction areas
  - Low potential for commercial timber harvest
  - Varied equipment and techniques used
  - Pre- and post-harvest ecological and silvicultural data collection

Harvest Site 1 – Gust Lake
**Potential Harvest Equipment**

- Ponsse Buffalo Dual biomass harvester

**Potential Harvest Equipment**

- John Deere energy wood harvester (bundler)

**Potential Harvest Equipment**

- Tub grinder

**Woody Biomass Market**

- Laurentian Energy Authority
  - Two municipal district energy combined heat and power plants in Hibbing and Virginia, MN
  - Biomass fuel will displace 75% of coal
  - Sell 35 mw biomass to Xcel Energy for 20 years to meet state mandate
Related Legislation

- Woody Biomass Mandate passed in 2005
  - Sustainable and renewable biomass harvests
  - Verification by third party system
  - Harvesting guidelines developed by July 2007

Guideline/BMP Development

- DNR Ecological Services, Fish and Wildlife and Forestry combined with Minnesota Forest Resources Council are developing guidelines for the sustainable harvest of woody biomass
- Integrated guidelines for brushland and forestland
- Focus on practices in northern and central MN that conserve
  - Soil productivity
  - Biological diversity
  - Wildlife habitat

Next Steps

- Test harvests summer 2006
- Data collection and analysis
- Dissemination of results to address the two key barriers
  - Information for loggers
  - Data for developing standards

Thank You!

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