Wood Education & Resource Center
Program & Activities

Steve Milauskas
Ed Cesa

WERC

WOOD EDUCATION
AND RESOURCE CENTER
Purpose

Provide an overview of the Wood Education and Resource Center (WERC)
Wood Education and Resource Center

Princeton, WV
Wood Education and Resource Center

Main (left)  Training Annex (center)  Rough Mill (right)
WERC’s Mission

Foster interaction and information exchange with the forest products industry to enhance opportunities for sustained forest products production in the eastern hardwood region of the United States.
WERC’s Goals
WERC’s Goals

- Improve the knowledge, skills, and capacity of workforce & management
- Increase communication, cooperation, and collaborative problem solving
- Improve efficiency in forest products manufacturing and wood utilization
- Promote sustainable utilization of woody biomass for energy
WERC Promotes

- Technology transfer that is practical, applied, creative & useful
- Short-term projects with immediate industry impacts
- Innovation & problem solving
- Partnerships
WERC Partnerships

Only way to meet goals is through cooperative partnerships.

- VA Tech – Department of Wood Science and Forest Products
- Associations including NHLA, WCMA, AHMI, NWFA, AWI
- Various businesses, non-profits, universities, government agencies
WERC’s Audience

- Primary Hardwood Manufacturing Industry (sawmills and related businesses)
- Secondary Hardwood Manufacturing Industry (furniture, kitchen cabinets, flooring, pallets, moulding, architectural woodworking, etc.)
- Entrepreneurs and small wood businesses
- Primarily target small- to medium-sized firms in the 35-state eastern hardwood region
WERC States – Eastern Hardwoods

Eastern Hardwood Forest

162 Million Acres

35 States

93% total Eastern forest = private + other public

83% total Eastern forest = private only
WERC’s Annual Budget

- 2007: $2.6 million
- 2008: $2.6 million
- 2009: $1.9 million
- 2010: $1.9 million
- 2011: $960,000*
- 2012 estimate is $960,000

* WERC received an additional $1 million of supplemental funding primarily for biomass-related project activity.
WERC Cluster

Facilities – offices, training, manufacturing

Public / Private Partnerships

Forest Resources

Training

Technology Transfer

Investment Capital

Work force - labor

Infrastructure

Research
WERC Manufacturing Facilities
Leased to Accurate Millworks
WERC’s Key Functions

- Annual competitive grants program
- Training and workshops
- Woody biomass technical assistance
WERC’s Competitive Grant Program

- Key to implementing mission and goals
- Budget – approximately $1 million last 5 years
- Request for proposals announced around December 1st
- Proposals due around February 1st
- Posted on the WERC Web site:
  www.na.fs.fed.us/werc/grants.shtm
WERC’s Competitive Grant Program

Priorities:

- Maintain industry economic competitiveness
- Address urgent issues on a global or domestic scale – phytosanitation issues, emerald ash borer outbreaks
- Increase the sustainable use of woody biomass
Training and Workshops

Key to implementing mission and goals

◘ Workshops
◘ Webinars
◘ Conferences

Posted on the WERC website:

www.na.fs.fed.us/werc/events.shtm
Training and Workshops

- New Profitable Business Strategies That pay for Value-Added Wood Products Manufacturers
  - Sponsors included North Carolina State University – Wood Products Extension, and Woodshop News
  - Tuesday, November 8, 2011
  - Contact: Harry Watt at 704-880-5034
  - Location: WERC

- Profitably Drying Small Quantities of Lumber
  - Sponsors included North Carolina State University – Wood Products Extension, and Woodshop News
  - Wednesday & Thursday, November 9&10, 2011
  - Contact: Harry Watt at 704-880-5034
  - Location: WERC
Training and Workshops

- Webinar Series on Biomass Energy
  Biomass Thermal Energy Council
  http://www.biomassthermal.org/resource/webinars.asp

  Regional Developments of Biomass Energy
  - Northeast Region
  Date: Wednesday, October 19, 2011 at 1 PM ET

  Green Heat for Homes archived webinar
  http://www.biomassthermal.org/resource/webinars.asp#2

  Biomass Energy – A Policy Outlook archived webinar
  http://www.biomassthermal.org/resource/webinars.asp#3
Key Topics for Ed Cesa

- Annual competitive grants program results
- Woody biomass technical assistance
WERC’s Competitive Grant Program

Examples of Grant Activity

1. Emerald ash borer/ash utilization
2. National skill standards for woodworkers
3. Web-based products
1. Emerald Ash Borer/Ash Utilization
Utilization Options for Emerald Ash Borer-Killed Ash

- Goal is to minimize removal and disposal costs of EAB-infected ash trees
- Turning wood waste into usable products
- Training urban foresters and tree care workers about proper log manufacturing
- www.semircd.org/ash/
Species: Ash  
Product Type: Other  
Quantity: 1  
Price each: $1450.00  
Character Description: Rustic (some knots)  
Moisture: Kiln-dried  
Finishing/surfacing: S2S  
Thickness: 7/4  
Widths available: 12 in. +  
Mill: John Haling  
ID: JHAL080922.1  

**Harvesting Story**  
This ash tree was removed from a back yard on Franklin St. in Ann Arbor, MI. It was killed by the emerald ash borer.

**Notes**  
This ash slab has been sanded and several coats of oil-based urethane have been applied. Natural edges and visible staining from metal in the tree add to the beauty of this one-piece slab. This is a one of a kind.
Welcome to the Ash Utilization Options Project of Southeast Michigan

The Southeast Michigan RC&D Council is addressing the emerald ash borer infestation (EAB) in Southeast Michigan in a positive way by implementing an Ash Utilization Options Grant from the USDA Forest Service Wood Education and Resource Center.

Through demonstration projects, training sessions, a research program, and education and outreach efforts, the Council is helping communities and businesses to develop value-added products from urban trees removed due to the emerald ash borer and other causes.

Be sure to visit our resources page for helpful information, including links to urban wood use initiatives in other states, guides for homeowners, and resources for communities.

To stay informed about the Council’s current activities, please visit our news page, see our events listing, or join our newsletter mailing list.
Firewood Sanitation Issues – Reducing the Threat of Spreading Invasive Species

- Heat Sterilization of Ash Firewood for Thermal Eradication of EAB
- Heat Treatment of Firewood – Meeting Phytosanitary Requirements

Many other partners have worked on this issue.
2. National Skill Standards for Woodworkers

- Architectural Woodwork Institute and partners developed the Woodwork Career Alliance (WCA)
- Goals is focused on having a highly trained workforce
- Skill standards; credentials; working with associations, employers, employees
2. National Skill Standards for Woodworkers

- Woodwork manufacturing skill standards for tools & machinery & operations

- Observable - measurable standards for tool and machine operations to evaluate performance and results produced by woodworking professionals.

- http://woodworkcareer.org/
2. National Skill Standards for Woodworkers

- Credentials / “Woodwork Passport”
- Portable, permanent record of a woodworker's level of competency in tool and machine operations
- [http://woodworkcareer.org/](http://woodworkcareer.org/)
2. National Skill Standards for Woodworkers

Anticipated benefits:

- Employers have access to skilled employees
- Employees have a means to demonstrate and document their woodworking skills
- Increases the professionalism of woodworkers and ensures a well-trained and well-respected workforce.
Tool and Machine Operations

Measurable standards for 12 tool groups, covering 30 tools and machines and their operations, have been finalized. We are currently working on the next 30 tools. When the Skills Standards project is completed, it will include more than 100 machines and tools as well as the woodworker’s relationship to them through skill standards, evaluation and a recognition or credit process. View the future tools for which we will write skill standards and offer your feedback.

WCA tackled the most valuable, foundational 30 machines and tools first. These are the 30 that all woodworkers - from the student, to the apprentice and the master - will always have to know. Each of the following groups has from 5 to 25 tools and machines, with each tool or machine having multiple operations:
3. Web-based Products

Various grants result in a variety of products available on-line

- Provide tools and information to businesses and employees
- User-friendly formats and approach
Planning & Analysis in Timber Harvesting

Spreadsheet Utility & Instruction Manual

Developed by STEVEN BICK
Published by Northeastern Loggers' Association & The Forest Enterprise Institute, Ltd.
A Marketing Guide
for Small and Medium Sized
Primary Forest Products Processors

Robert L. Smith
Edward T. Casa
Patrick M. Rappold
WERC Web Site: www.na.fs.fed.us/werc/
Key Topics

- Annual competitive grants program results
- Woody biomass technical assistance
Woody Biomass Technical Assistance
Woody Biomass Technical Assistance

- Opportunities for wood businesses to improve their competitiveness – combined heat & power opportunities
- Opportunities for wood businesses to provide products – chips & fuel pellets as fuel for energy system upgrades and conversion
- Potential market for low-value local wood
- Cost savings
Woody Biomass Technical Assistance

- Provide pre-feasibility assessments of existing energy system for business, commercial, and institutional buildings and facilities
Woody Biomass Technical Assistance

- Snapshot of whether or not opportunity exists for converting energy system to wood
- If positive, more detailed feasibility assessment can be completed
Process

- State forestry utilization specialist makes contact with school, hospital, facility
- Specialist tours facility, discusses wood energy potential and potential assessment
- Specialist discusses visit with U.S. Forest Service biomass coordinator and energy consultant
- Level I Assessment may begin
Preliminary Feasibility Study

Woody Biomass Utilization
Sullivan County School District
Elementary and High School Complex

March 9, 2010
Preliminary Feasibility Study Details

- Energy Use and Systems
- Biomass System Description
- Financial Analysis of Biomass System
- Funding Opportunity
Biomass boiler covers 85% of heating needs

Existing fuel oil boilers remain as backup and to cover peak and low use times

Schematic courtesy of Viessmann
Thermal Storage/Buffer Tank

- Load fluctuates greatly during a 24-hr period
  - Thermal storage is a buffer, separating changes in demand from boiler
  - Allows boiler to run at a more consistent rate, with less ramping up and down = increase in efficiency
- Increases ability of system to meet heating needs during short peak and low-demand periods
WERC Web Site: www.na.fs.fed.us/werc/
For more information

smilauskas@fs.fed.us
ecesa@fs.fed.us
304-487-1510
www.na.fs.fed.us/werc/