

# Wood Education & Resource Center Program & Activities

**Steve Milauskas**

**Ed Cesa**



**WOOD EDUCATION  
AND RESOURCE CENTER**





# Purpose

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

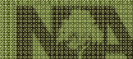


# Wood Education and Resource Center

Princeton, WV

**WERC**

**WOOD EDUCATION  
AND RESOURCE CENTER**





# 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**

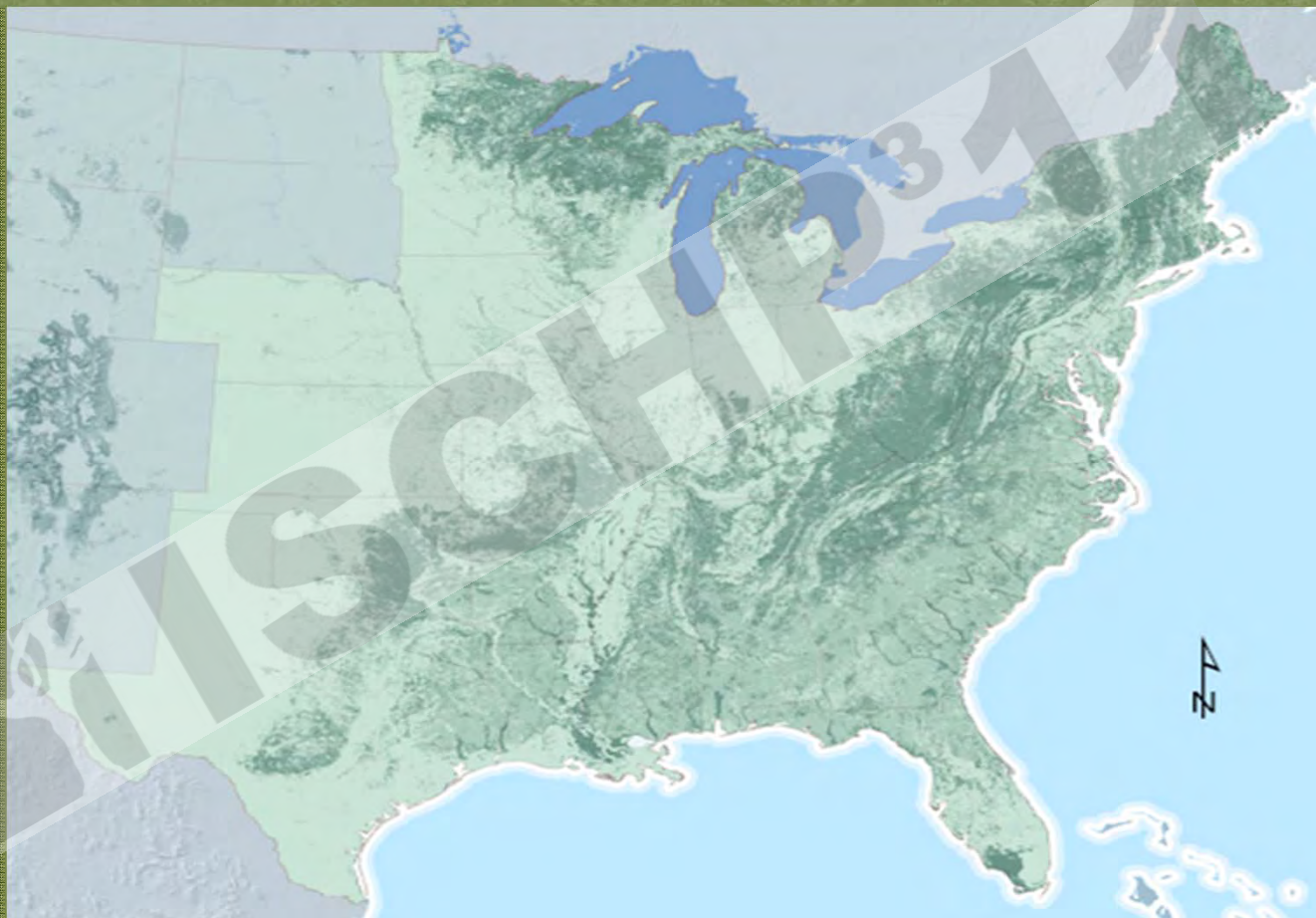


# WERC States – Eastern Hardwoods

Eastern  
Hardwood  
Forest

162  
Million  
Acres

35 States



93% total Eastern forest = private + other public  
83% total Eastern forest = private only



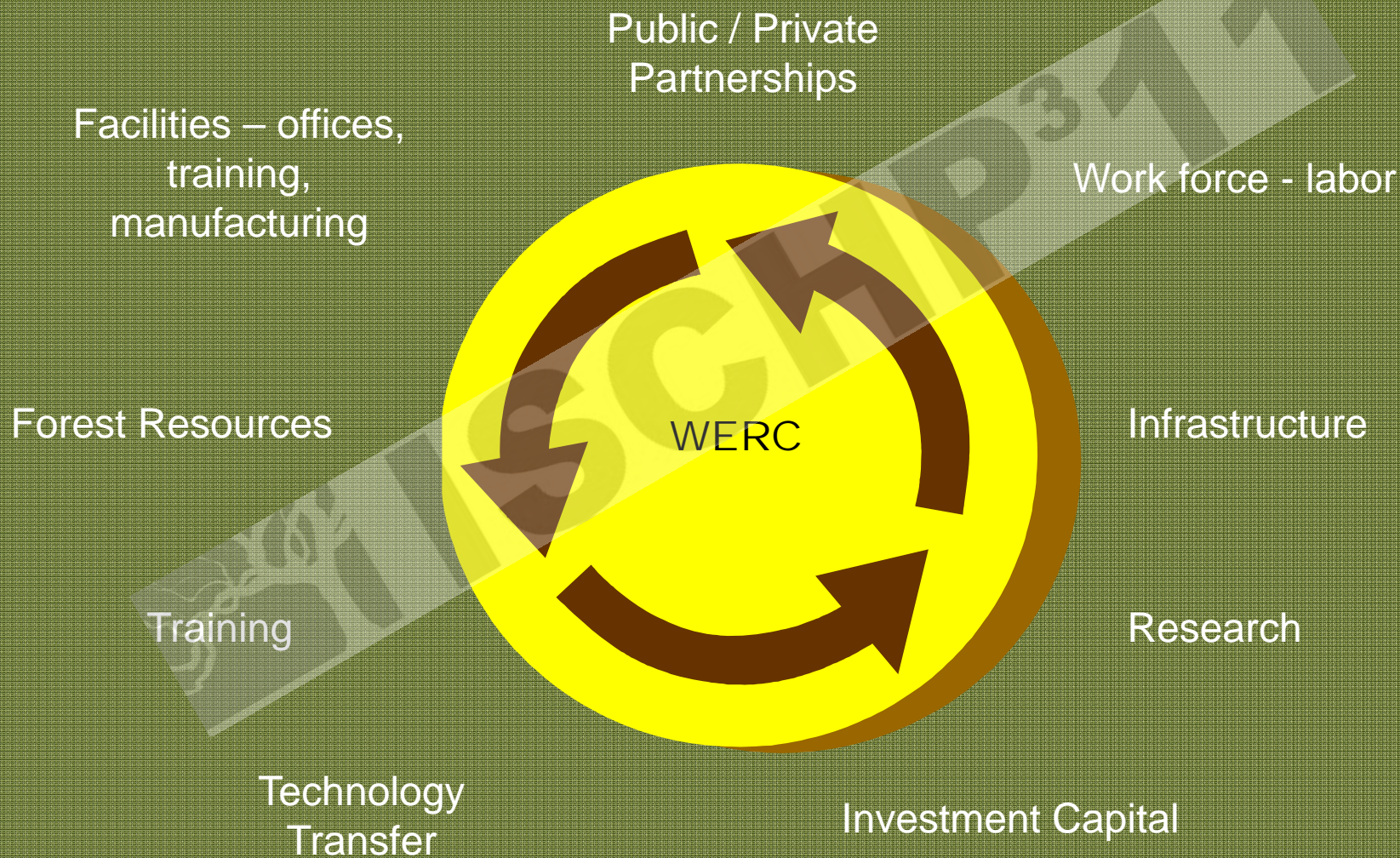
# WERC's Annual Budget

■	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





# 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](http://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](http://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/](http://www.semircd.org/ash/)











Tansu Chest  
[kriegshauser@iit.edu](mailto:kriegshauser@iit.edu)



# Urbanwood.org

Southeast Michigan's  
Reclaimed Wood Marketplace

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[Home](#) » [Store](#)



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.







# ASH Utilization Options Project



A PROJECT OF THE  
SOUTHEAST MI RC&D

## 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.



### News

**Council Seeking Proposals for New Urban Wood Use Site**

[\(Learn more\)](#)

**ReArt Gallery Seeks Urban Wood Artists**

[\(Learn more\)](#)

**More Wood Use News -- See the July Newsletter**

[\(Learn more\)](#)

**Council Awarded New Federal Grants for Wood Use**

[\(Learn more about the demonstration grant | Learn more about the marketing grant\)](#)

**Council Seeking Administrative Contractor**

[\(Learn more\)](#)



# 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
- <http://spfnic.fs.fed.us/werc/finalrpts/07-DG-114.pdf>





Many other partners have worked on this issue.



**Illinois**  
Department of  
**Agriculture**



Illinois Emerald Ash Borer Wood Utilization Team



## 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/>





## 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 Operations - Microsoft Internet Explorer provided by USDA Forest Service

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First Edition  
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Skill Standards

TOUR THE  
SKILL  
STANDARDS!

## 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:

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### 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



# P A T H PLANNING & ANALYSIS IN TIMBER HARVESTING

SPREADSHEET UTILITY & INSTRUCTION MANUAL



Developed by **STEVEN BICK**

Published by **Northeastern Loggers' Association & The Forest Enterprise Institute, Ltd.**









United States  
Department of  
Agriculture

Forest Service

Northeastern Area  
State and Private  
Forestry

NA-TP-02-07CD  
June 2008



## A Marketing Guide for Small and Medium Sized Primary Forest Products Processors

Robert L. Smith  
Edward T. Cesa  
Patrick M. Rappold





Indiana Forest Products Community at Purdue University - Windows Internet Explorer provided by USDA Forest Service

http://www.indianaforestproducts.com/

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Indiana Forest Products Community at Purdue Univer...




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# Indiana Forest Products Community

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Directory Search  
Company Name   
  
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**All Forest Product Sectors**  
Welcome!  
There are 1571 companies in our directory  
[Get started](#)

Logging & Harvesting	Primary	Secondary
		
Logging & Harvesting	Primary	Secondary

Welcome to Indiana Forest Products Community. Wood Products Industry is Indiana's number one agricultural cluster in terms of value added (\$9 billion) and in terms of growth potential. Wood products businesses employ roughly 50,000 Hoosiers and provide an average wage of \$31,000 per year. In aggregate, the wood cluster stands as one of the top two segments of Indiana's agricultural economy. Over the last ten years, Indiana's wood products cluster has a stronger growth picture than any other cluster in the agricultural economy. Both jobs and wages have continued to increase.

The mission of Indiana Forest Products Community is to bring the entire forest products industry partners in the state of Indiana in the form of a community, which

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# WERC Web Site: [www.na.fs.fed.us/werc/](http://www.na.fs.fed.us/werc/)

Wood Education and Resource Center, NA - Forest Health Protection - Microsoft Internet Explorer provided by USDA Forest Service

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## Northeastern Area

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- Forest Health Management
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- Technical Assistance
- Pesticide Use Management
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- Forest Stewardship
- Publications
- Sustainability and Planning
- Urban & Community Forestry

### Wood Education and Resource Center



The Wood Education and Resource Center, located in Princeton, WV is a USDA Forest Service facility with offices, training facilities, and a rough mill. The WERC mission is to facilitate interaction and information exchange with the forest products industry to enhance opportunities for sustained forest products production in the eastern hardwood forest region of the United States.

The Wood Education and Resource Center supports managerial and technical innovation to keep businesses competitive. It provides state-of-the-art training, technology transfer, networking opportunities, applied research, and information.

WERC serves the primary and secondary hardwood manufacturing industries located in the 35 [states](#) of the eastern hardwood [forest region](#).

#### WERC's Primary Goals

- Improve the knowledge, skills, and capacity of the forest industry management and workforce.
- Increase communication, cooperation, and collaborative problem solving within the forest products industry.
- Improve efficiency in forest product manufacturing and wood utilization.

The Wood Education and Resource Center is easily accessed from I-77. Click [here](#) for location information, driving directions and a local map.

#### Resources

- Contact WERC
- Grant Opportunity
- HONE!
- Press Releases
- Project Info. and Final Reports
- Staff
- Workshops and Training Opportunities
- Webcast Archive
- WERC Success Stories
- WERC Technical Resources

#### Hot Topics

- Eastern Hardwood

Click here →

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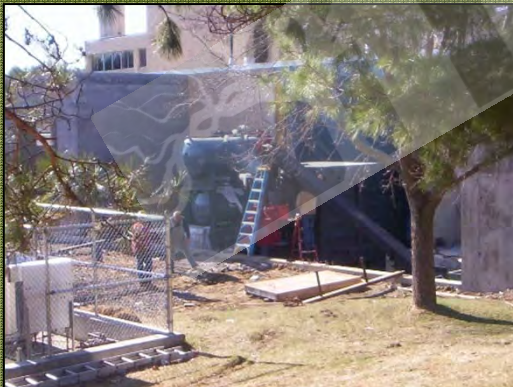


# Key Topics

- 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



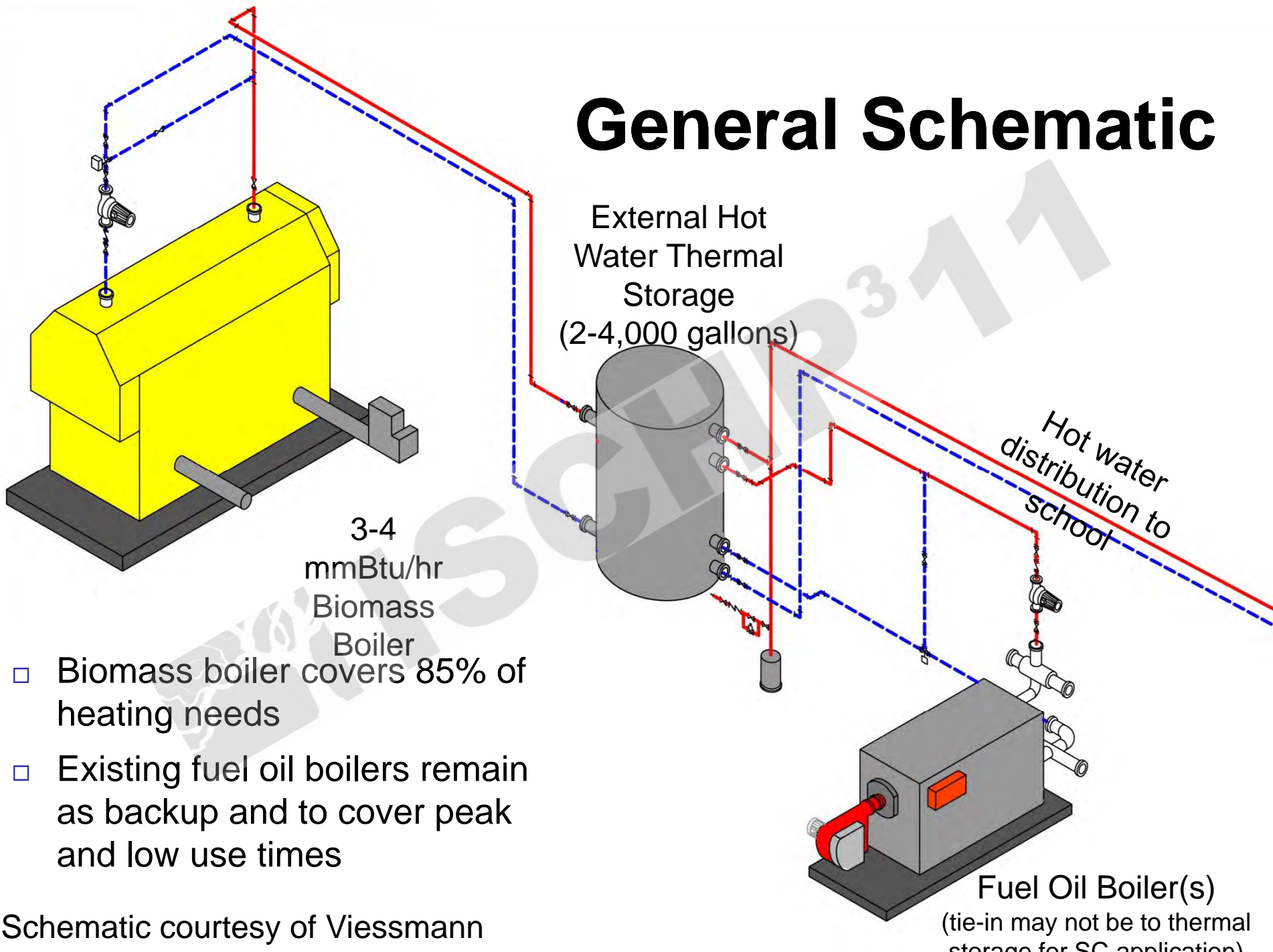


# Preliminary Feasibility Study Details

- Energy Use and Systems
- Biomass System Description
- Financial Analysis of Biomass System
- Funding Opportunity



# General Schematic



- 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**



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# For more information

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**WERC**

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