

Woody Biomass and Small Log Workshop: From Feedstock to Product

September 19-20, 2007
College of the Siskiyous, Weed, California

PURPOSE AND OBJECTIVE

Our goal is to provide a forum for key players to discuss biomass resource and market development opportunities in Northern California. The first day will consist of panel presentations in the areas of feedstocks & fiber supply, biomass conversion technologies (products and energy), policy & environmental considerations and will conclude with identification of funding and sources of assistance. The target audience includes public, private and tribal forest resource managers, policy makers, natural resource professionals, loggers, biomass contractors, interested businesses, utility companies and interested citizens.

WORKSHOP SPONSORS

University of California, Berkeley, Center for Forestry
California Association of Resource Conservation & Development Councils
Forest Products Society – Pacific Southwest Chapter
Oregon State University, Oregon Wood Innovation Center
USDA Forest Service, Pacific Southwest Region

EXHIBITORS

Advanced Recycling Equipment, Inc.
Forest Products Society – Pacific Southwest Chapter
Pacific Biostock Services

STEERING COMMITTEE MEMBERS

Bruce Goines, USDA Forest Service
Tad Mason, TSS Consultants
Gareth Mayhead, University of California Cooperative Extension
Gary Nakamura, University of California, Center for Forestry
John R. Shelly, University of California Cooperative Extension

Logistics and Registration: Sherry Cooper, UC Berkeley, Center for Forestry

CONTINUING EDUCATION CREDITS

Society of American Foresters Continuing Forestry Education Credits:

September 19, 2007 – 7 Hours, Category I

September 20, 2007 – 3 Hours, Category I

If you would like to receive credit from another organization, please contact Sherry Cooper, 530-224-4902, slcooper@nature.berkeley.edu

Visit our conference website at <http://forestry.berkeley.edu/biomass/index.html>



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PROGRAM OF EVENTS Wednesday, September 19, 2007

- 8:00 AM – Registration and coffee
- 8:30 **Opening Session**—Woody Biomass: Is It a Problem or a Solution?—*John Shelly, University of California, Berkeley*
- 8:50 **Panel: Feedstocks/Fiber Supply**
Moderator: Bruce Goines, US Forest Service, Region 5, Vallejo, California
- 8:55 **The Challenge of Small Tree Harvesting and Handling**—*Bruce Hartsough, Biological and Agricultural Engineering, University of California, Davis*
- 9:15 **Wood Supply to Industry**—*Michael Backes, Roseburg Forest Products Co., Weed, California*
- 9:30 **Federal Lands Perspective**—*Rod Vineyard, USDA FS, Eagle Lake Ranger District, Susanville, California*
- 9:45 **Biomass Power Generation**—*Gordon Draper, Biomass One, White City, Oregon*
- 10:00 **Discussion Facilitated by Moderator**
- 10:20 Refreshment Break
- 10:50 **Panel: Biomass Conversion Technologies
Lumber, Veneer and Composites**
Moderator: Gareth Mayhead, University of California, Berkeley
- 11:00 **Lower Capital Investment Biomass and Smaller Log Processing Options**
—*Larry Swan, USDA Forest Service, Klamath Falls, Oregon*
- 11:15 **Small Log Utilization: Veneer and Plywood**—*Scott Janni, Management Solutions and Services, Inc., Whitefish, Montana*
- 11:30 **Small Log Utilization: Lumber**—*Chris Skinner, Sierra Pacific Industries, Burney, California*
- 11:45 **Woody Biomass Utilization in Oregon**—*Scott Leavengood, Oregon Wood Innovation Center, Oregon State University, Corvallis, Oregon*
- 12:00 **Discussion Facilitated by Moderator**
- 12:20 **Catered lunch**



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- 1:20 **Panel: Biomass Conversion Technologies**
Biomass to Energy—Heat, Electricity, Liquid Fuels
Moderator: John Shelly, University of California, Berkeley
- 1:30 **Energy for Public Buildings and Other Small Scale Applications—Rob Williams, California Biomass Collaborative Forum, University of California, Davis**
- 1:50 **Biomass Power Plants and Other Energy Applications—Tad Mason, TSS Consultants, Rancho Cordova, California**
- 2:10 **Liquid and Gaseous Fuels—Bryan Jenkins, Agriculture and Biological Sciences Engineering, University of California, Davis**
- 2:30 **Discussion Facilitated by Moderator**
- 2:50 Refreshment Break
- Panel: Environmental Considerations**
Moderator: Bill Stewart, University of California, Berkeley
- 3:05 **The Value of Carbon in Forests—Bill Stewart, University of California, Berkeley**
- 3:30 **Air, Water and Land Use Permitting Considerations for Biomass Energy Facilities in Oregon and California—Fred Tornatore, TSS Consultants, Rancho Cordova, California**
- 3:55 **Discussion**
- 4:15 **Closing Session: The Pathway Forward**
Moderator: Gareth Mayhead, University of California, Berkeley
- 4:20 **Forest Service Resources—Bruce Goines, US Forest Service, Region 5, Vallejo, CA**
- 4:30 **Policy Direction – Doug Wickizer, California Department of Forestry and Fire Protection, Sacramento**
- 4:40 **Research Direction and Funding—Bryan Jenkins, Agriculture and Biological Sciences Engineering, University of California, Davis**
- 5:00 **Discussion**
- 5:10 **Briefing on Field Tours and Closing Remarks—John Shelly, University of California, Berkeley**
- 5:30 Adjourn

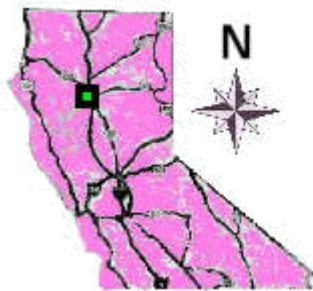


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Tri-Tip & Pork Roast BBQ Dinner at Lake Siskiyou Picnic Area
Wednesday, September 19, 6:30 pm

- If you are registered for the dinner, it will be indicated on your workshop packet label.
- The dinner is \$20. See Sherry if you want to register.
- Group transportation is not provided.
- Tickets for entry into the picnic are will be distributed in packets for those who have registered. If you lose your ticket, the entry fee is \$1.
- If you need to contact us on workshop days, call Sherry's cell phone at 530-917-4268.

Lake Siskiyou Resort and Camp
4239 W. A. Barr Rd
Mt Shasta City, CA



Central Mt. Shasta I-5 exit.
West to stop at Old Stage Rd.
Turn left. Go 1/4 mile to fork.
At fork stay to the right.
At W. Ream Ave. stop go straight.
Past golf course, over the dam and
continue on W.A. Barr Rd. 1.5 miles
to Lake Siskiyou Camp-Resort.

map is not to scale



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Field Tour Agenda Thursday, September 20, 2007 *Lunch and Bus Transportation are Provided*

- 8:00 a.m. Check-in at the College of the Siskiyous - parking lot F (in front of the Kenneth W. Ford Theater), Weed, CA (coffee and bagels, pick up box lunches)
- 8:30 a.m. Buses (2) depart to sites. Each bus will visit the sites separately to avoid over crowding on the tour. Each bus will visit Roseburg Forest Products in Weed, Sierra Pacific Industries in Burney and the Siskiyou Opportunity Center in Mount Shasta. Further details are below.
- 4:00 p.m. Arrive back at College of Siskiyous

Roseburg Forest Products, Weed

This is a mill that peels logs to make veneers that go into plywood. The veneer is transported to other mills for plywood lay up. Ponderosa Pine, Sugar Pine, Lodgepole Pine, Knobcone pine, Douglas fir and White Fir, Red Fir are the main species used. The mix is 30% Pine, 10% DF and 60% WF. The mill runs two 9 hour shifts per day 6 days per week and employs about 150 people in the veneer plant and boiler plant.

Roseburg owns approximately 200,000 acres of timberland in Northern California and the mill uses about 60% of the companies own timber.

A 130,000 lb steam boiler supplies process heat for the mill and runs primarily on mill bark and waste. Currently about 15% of fuel is purchased from outside the mill which includes forest thinnings, logging slash and other forest generated wood waste. A 15 mega watt turbine is being installed into the boiler. This will increase consumption of other fuel to about 60%.

Clean chips are currently sold to pulp plants on the California coast and along the Columbia River corridor. The chip sales program is market dependent, and as fuel becomes scarce or pulp chip values decrease chips will be burnt in the boiler. Fines are sold to a particle board plant and occasionally bark is sold to decorative bark distributors.

Siskiyou Opportunity Center, Mount Shasta

Siskiyou Opportunity Center is the demonstration site for a Biomax 25kW gasification system. Biomax is the name used by Community Power Corporation for its family of power systems that convert biomass energy to thermal and/or electrical power. The equipment is a small modular distributed energy biomass power system based on downdraft gasifier technology that uses high bulk density fuels such as woodchips and nut shells to produce both heat and power. This system is a stationary installation.



Thomas Deerfield will talk about the process of raising finance, community organizing and agency-wrangling for the project. He is the President of Shasta Energy Group (SEG), a 501c3 nonprofit that promotes renewable energy and sustainability. SEG also promotes wind and solar energy, as well as green building, recycling and sustainable economic development.

The project began in 2001, and took several years to finalize with the purchase and installation of a Biomax 25kW that turns wood chips into kilowatts and heat in 2006/2007. Many lessons have been learned from the development process and ongoing operational challenges.

Sierra Pacific Industries, Burney

The SPI Burney plant was originally built in the early 1940's by Scott Lumber Co. It was purchased by Publisher's Forest Products in the late 60's. The original mill was a large log mill that operated until approximately 1978. In 1971, Publisher's built a small log mill (existing site) and ran both plants until the late 1970's. The plant was purchased by Sierra Pacific Industries in September of 1978 and has undergone several retrofits/rebuilds since then. The 20 MW Cogeneration plant was originally built by Sierra Pacific Industries in 1986 with a new turbine and generator being installed in 2006. The mill currently processes White Fir, Doug Fir, Ponderosa Pine, and Sugar Pine with about 40% of the log supply coming from company owned lands. We produce dimensional products (2x4 through 2x12) out of White Fir and Doug Fir and board products (1x4 through 1x12) out of Ponderosa Pine and Sugar Pine. The plant currently employs 145 people (excluding trucking dept.) running two nine hour shifts, five days per week in both the sawmill and the planer.

