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Summary and Recap

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In partnership with:
USDA Forest Service Region 5

http://ucanr.org/WoodyBiomass

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Woody Biomass Utilization

Making a Difference for California

Thanks to the Workshop Sponsors…

- Sierra Nevada Conservancy
- California Association of Resource Conservation and Development Councils
- US Forest Service State and Private Forestry

- Plumas National Forest
- Sierra Pacific Industries
- Plumas Corporation
- Plumas Rural Services
- Sierra Institute for Community and Environment
- Sierra County Fire Safe & Watershed Council
- Plumas County Farm Advisor Department
- Northern California Society of American Foresters

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Resource Base - Public

- Area dominated by public lands (Butte ~40%, Lassen ~63%, Plumas ~70% and Sierra Counties ~70%)
- Ecological restoration is expensive ($800-1000+/acre) – how do we pay – saw logs or subsidy?
- Biomass utilization is an important component of ecological restoration on public lands
- Plumas NF has removed an average 38,000 GT/yr
- Litigation is a problem
- Steep ground is a challenge
- Fire suppression is even more costly ($7000-8000/acre)

Resource Base - Private

- Non-industrial owners have multiple objectives
- Biomass harvest is for reasons other than $$
- Economics determined by energy prices (CA consumers want “green” energy but they will not pay for it)
- Private industrial owners treat 55% slopes (FS stops at 35%)
- Removing biomass is an investment ($) in the stand
- Thinning leads to increased tree growth (future $)
- Fire Safe Councils typical project - $1,000/acre to treat vs $400/acre income

Existing Markets

- California has the most biomass power plants of any state (~32)
- Shasta County has 5 facilities – the most for any county
- Multiple sources of biomass: forest, agricultural and urban – price wins
- Urban wood needs to be blended with other fuels for optimal combustion
- Fuel sourcing for standalone plants is challenging
- Cogeneration (CHP) makes most sense
- Sawing small logs leads to lots of waste (= hog fuel)
- Existing markets offer the best and easiest opportunity for biomass utilization

New Opportunities

- Many potential product options
- Breaking wood down and putting it back together removes the defects that afflict small diameter logs
- Densified fuels (pellets, bricks, presto-logs) are a proven technology – find your niche
- Heating systems for buildings is a proven technology
- Small scale electricity is expensive
- Gasification emerging but developing rapidly in Europe/India/China
- Pyrolysis is emerging slowly as a potential source of char (or similar) and bio-oil
- Liquid fuels (lignocellulosic ethanol etc) are an emerging technology – 6yrs out

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Environmental Considerations

- Multiaged management is more productive than even-aged management
- Read GTR 220 (Sierra mixed conifers http://bit.ly/2rk2IK)
- Is this approach compatible with the Forest Practices Act?
- Soil compaction can be an issue depending on soil type
  - Protect the forest floor
  - Minimize skid trails
- Fuels reduction projects can be designed to have a neutral or positive impact on interdependent wildlife communities
- Biomass powerplants are tightly monitored by AQMD
  - PM 2.5 is a big issue
  - Proactive and supportive local Air District

Funding

- Grant funding is available
- BCAP
  - Phase 1 (transportation subsidy) being revised based on 25,000 comments
  - Phase 2 (growing bio-energy crops for powerplants) coming soon – think about project ideas now
- USFS WBU Grant
  - 2010 program results soon
  - 2011 program announcement September 2010
- If you do not apply you will not receive funding
- Things change – keep checking for opportunities

Questions and Opinions…

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