

Addressing Community Needs in Plumas County Through Biomass Utilization

West SWET Forum

November 14, 2017

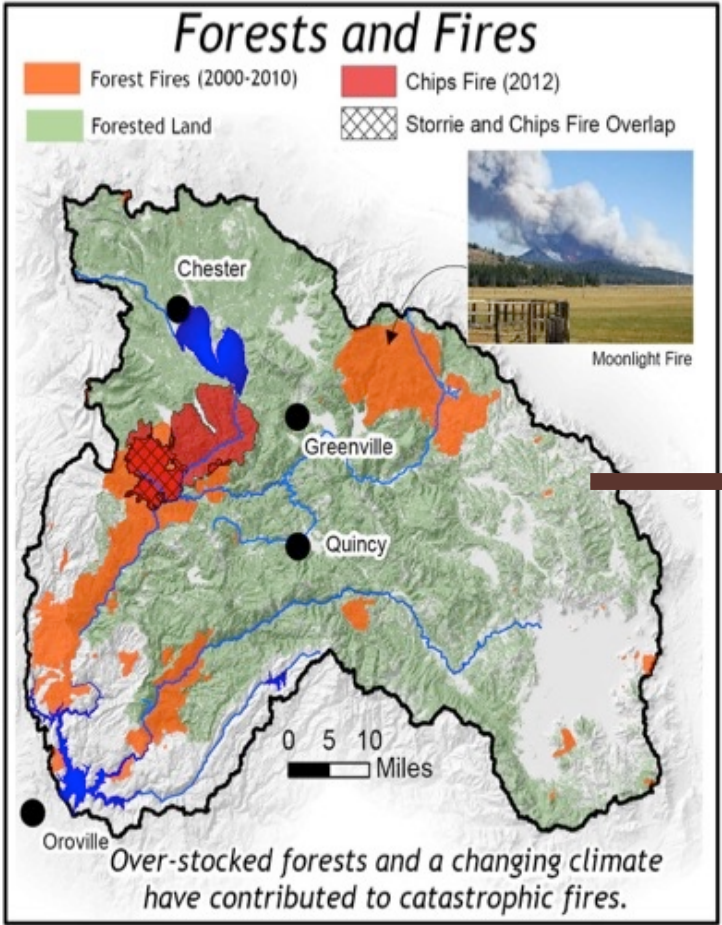


Plumas County: Rural and Heavily Forested

- 20,000 residents
- 8 people per sq. mi
- Unemployment—
2-3X the state
average
- Heavily forested with
high fire risk

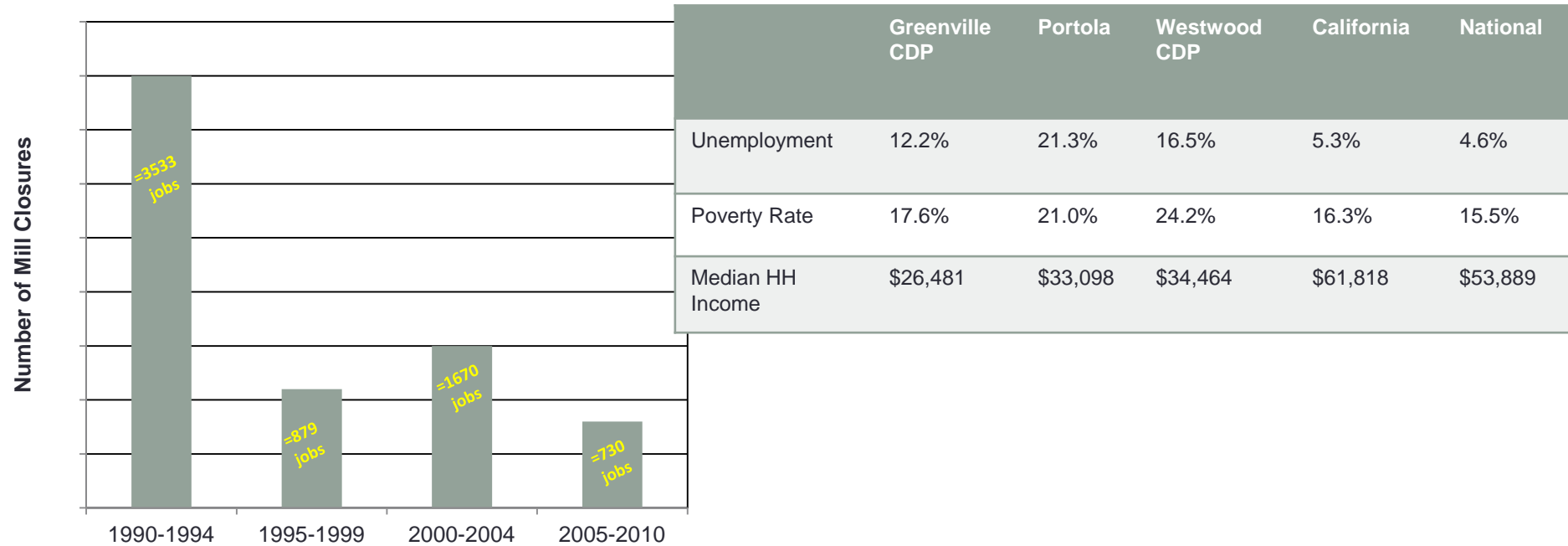


Unhealthy Forests = Mortality, Fire, Compromised Watersheds



Decline of Timber Industry=Loss of Wood Products Jobs

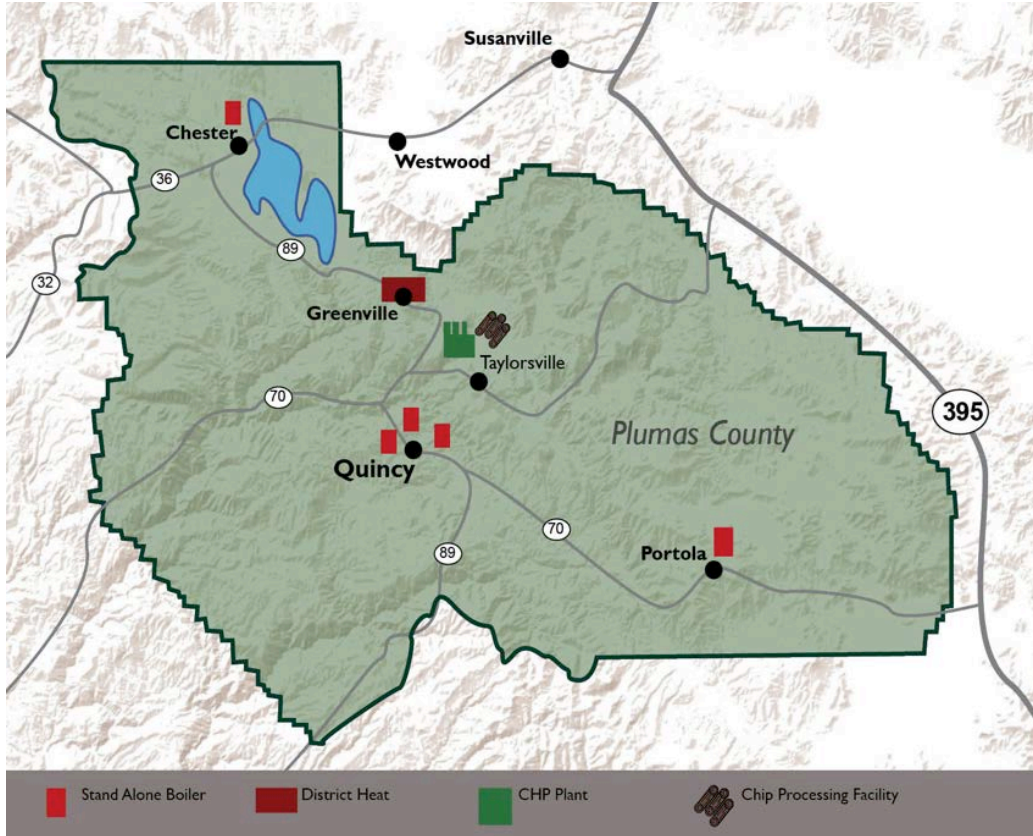
California Mill Closures and Subsequent Job Loss, 1990 - 2010



Source: Paul F. Ehinger & Associates

	Greenville CDP	Portola	Westwood CDP	California	National
Unemployment	12.2%	21.3%	16.5%	5.3%	4.6%
Poverty Rate	17.6%	21.0%	24.2%	16.3%	15.5%
Median HH Income	\$26,481	\$33,098	\$34,464	\$61,818	\$53,889

A Community-Scale Wood Solution



Wisewood Energy

Plumas Energy Efficiency and Renewables Management Action Plan

Plumas County:

- **Plumas Unified School District**
- **Fire Safe Council**
- **County Officials**
- **Hospital Administrators**
- **Feather River College**
- **Portola City Council**
- **Plumas National Forest**
- **Forestry Professionals**

Regional:

- **US Forest Service**
- **State Agencies**
- **UC Berkeley**
- **State Wood Energy Team**
- **CA Forest Biomass Working Group**
- **Other Communities**

Advisory Body

Danielle Banchio, Registered Professional Forester

Nick Boyd, Feather River College Director of Facilities

David Keller, Plumas County Community Development Commission

Charles Plopper, Professor Emeritus, UC Davis

Dony Sawchuk, Plumas County Director of Facility Services

John Sheehan, former Executive Director of Plumas Corporation

Lori Simpson, Plumas County Supervisor District Four

Elaine Vercruysse, Logging Systems Planner with the Plumas National Forest

Randy Wilson, Plumas County Planning Director

Heating Challenges

- No natural gas lines
- Reliance on fossil fuels for heat
 - Volatile prices
- Aging facilities

And an Opportunity....

Biomass heat:

- Stable, low heating costs
- Affordable, local, **abundant** fuel source
- Opportunity to create outlet for biomass, reduce risk of wildfires, create jobs



Biomass Heat for Plumas County Health and Human Services Center

- \$2.3M CEC EPIC grant
 - At least \$450,000 leveraged construction funds
- Biomass boiler + ORC power
 - 400 kW thermal energy
 - 35 kW electricity
- 400-500 bdt/year
- Boiler building is CLT



Hot water
220° F



Power
revenue,
\$ savings



Warm water
80° F



60° F



Photo credits: Wisewood Energy

We finally broke ground!





Using the local resources—
all construction contracts in
Plumas County



What's next?

- CLT delivery, building construction Nov – Dec
- Equipment installation: Jan - Feb
- Commissioning, then system online!
- Data collection



Ready for the boiler and CLT!



Building out the network

- Feasibility studies
 - Plumas District Hospital
 - Quincy Jr/Sr High School
 - Plumas National Forest Supervisor's Office
 - Eastern Plumas Health Care
- Next: USFS Wood Innovations grant to Plumas Unified School District
 - Engineering for biomass heating at Quincy High

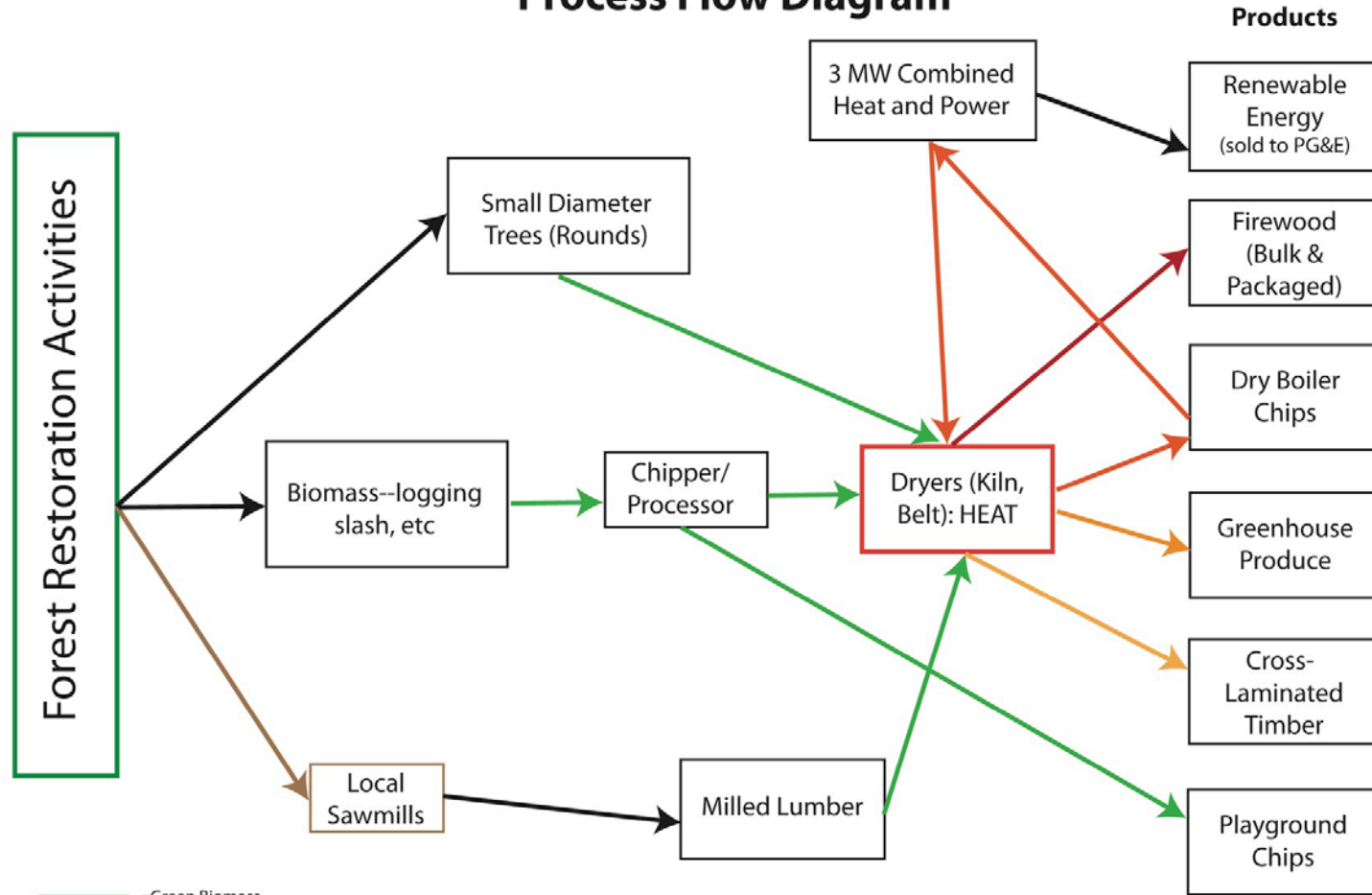


Facility Services Director
touring system in Burns

Crescent Mills Redevelopment

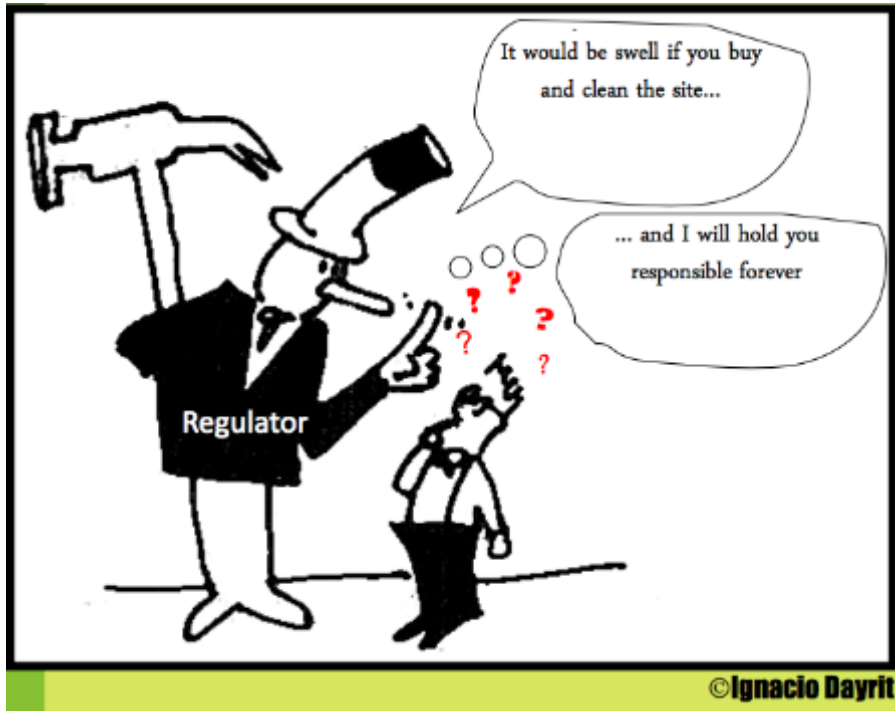


Indian Valley Wood Products Campus Process Flow Diagram



- =Green Biomass
- =Heat
- =Procurement via contract

Brownfield and Liability Issues



Contact

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