



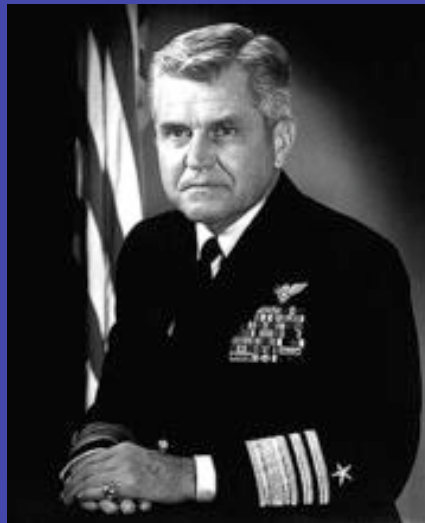
## Forest Biomass Utilization and Conservation Values

2008

[www.sierraforestlegacy.org](http://www.sierraforestlegacy.org)

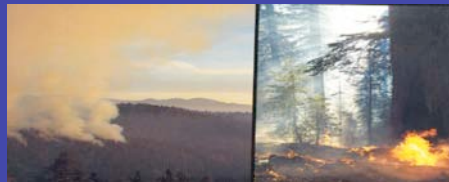
## Who am I? Why am I here?

- Warren Alford,  
Community Forestry  
Coordinator, Sierra  
Forest Legacy
- Phone: 209-795-2672
- E-mail:  
[warren@sierraforestlegacy.org](mailto:warren@sierraforestlegacy.org)



## Fire and Fuels Program Areas

- **Community Forestry**  
Using forest thinnings: biomass, small-log utilization, community sustainability
- **Community Protection**  
Firewise Communities Assessments  
6 representatives on local Fire Safe Councils
- **Smoke Management**  
Work with Air Districts, agencies to mitigate smoke impacts, etc.



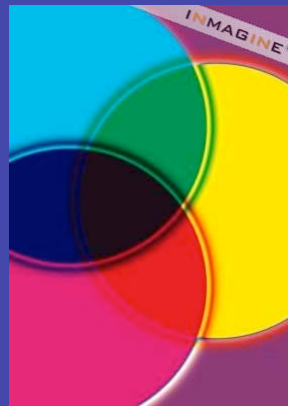
## Working Together

- Need to get past stereotypes
- Practice
- Get past “winners and losers” mentality



## Paths to Success

- Don't get side-tracked
- Focus on areas of agreement (80/20 Rule)
- Be willing to learn (parachutes)
- Use ears when possible
- Copy success
- Move towards opportunity
- Lighten up!
- Be Goldilocks



## "Spur Roads"

- Old-Growth Trees
- Fire Salvage
- Clear-cutting
- Roadless Area protection



## “Main-line Haul Roads”

- Wildfire risk reduction
- Community protection
- Defense Zone treatments
- Restoration
- Climate change responses
- Roads and ridges



## Basic Principles

Resource assessment is key -

- Sustainable supply
- Use and share “good” science
- Accessible (near existing road network, not too steep, not in sensitive area, etc.)
- By-product of restoration-outcome based as opposed to output based
- Objectives developed collaboratively
- Focus on “Defense Zone” and other strategic areas



## Conservation Community Objectives

- Protect areas for sensitive species
- Restore degraded forests and watersheds
- Reduce risks of “uncharacteristic” wildfire
- Protect human communities and homes
- Promote rural economic stability
- Understand impacts of activities at the landscape and site specific scales
- Restore ecosystem process
- Restore ecosystem structure
- Maintain existing wood processing infrastructure while developing new community-scale industries.

More of this:



Less of this:





## Evolving West

about finding the opportunities in change and realizing on those opportunities in a way that sustains quality of life for this and future generations. I can wake each morning and fight the old, tired battles defined by words of Yesteryear, or I can appreciate God's bounty and opportunities where we don't take from one generation to provide for another." Montana Governor Schweitzer

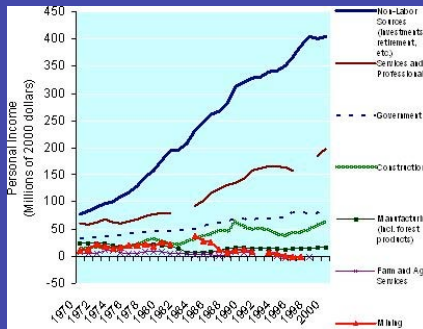
### Communities is Dependent on their Outstanding Quality of Life:

- **The Sierra Nevada's blue skies, wide open vistas, abundant snowfall, rushing streams, healthy forests and lovely historic towns draw visitors from around the world.**
  - Tourist spending accounts for over \$3 Billion in revenues to Sierra Nevada communities
- **"Deteriorating natural assets, such as polluted streams, or marred scenery, reduce property value, drive away new businesses and undermine the quality of life for current residents."**

(Sierra Business Council, 1999)

## Opportunity to Leverage Investment To Stimulate Local Economy

- **Services and professional income have tripled; and non-labor income from investments and retirement which are up five-fold. Combined, they are worth \$1 billion to the county.**



## Even-aged Management Resources

### Industry

- Sierra Pacific Industries: <http://www.spi-ind.com/>
- CA Forest Foundation: [www.calforestfoundation.org](http://www.calforestfoundation.org)
- Sustainable Forestry Initiative: [www.sfi.org](http://www.sfi.org)

### Environment:

- Ebbetts Pass Forest Watch: [www.forestwatchers.org](http://www.forestwatchers.org)
- Stop Clearcutting: [www.stopclearcuttingcalifornia.org](http://www.stopclearcuttingcalifornia.org)
- Forest Stewardship Council: [www.fsc-us.org](http://www.fsc-us.org)

## 20 Year Vision:

Every forest community in California has the capacity to address and utilize the excess biomass in their area that is appropriately scaled to be economically and ecologically sustainable so that local jobs are created that help restore the environment and reduce fire risk.



# We Need To Re-build Community Infrastructure



\*California is the largest consumer of pellets and wood poles yet has marginal manufacturing capacity.

## Case Study: Value-Added Sort Yards

“We simply need to do small-scale on a large-scale” Lynn Jungwirth, The Watershed Center, Hayfork, CA

### Proposed Projects:

- Nevada County Wood-use Sort Yard
- West Point C.H.I.P.S. Project



## Case Study: Biomass to Energy Truckee PUD

**15Kw grid-intertie  
system-**  
installed 11/2005



Proposed projects:

- Truckee PUD 3 MW system
  - San Bernardino Biomax 75
  - Mt. Shasta Biomax 25
- The "Sweet Spot: 3MW or less

## Biomass Heat- Proven Technology In the Eastern U.S.

- A 1993 survey of biomass installations in the Northeast and adjacent regions found 43 schools, 26 hospitals, 17 colleges, 22 greenhouses, six correctional institutions, and 20 commercial or industrial facilities that are using biomass fuel.



## Case Study: Fuels to Schools: South Lake Tahoe High School

- Replacing diesel-fueled boiler with clean-burning wood from restoration projects in the Tahoe Basin.



## Case Study: Forest Thinnings to Heat- Sierra Fresh Tomatoes



## What, Where, When, Why

- Size Matters
  - 3MW Biomass to Energy
  - Community scale- distribute risks, impacts, benefits
  - 30" Defense Zone (250,000 Ac in Sierra)
  - 20" General Forest
  - 12" Old Forest Emphasis Areas
- Focus on "right" material critical
  - Surface and ladder fuels
- Location, location, location
  - Around Communities
  - Near Roads
  - Along Ridge tops
- Emulate Success
  - White Mountain Stewardship Project

## White Mountain Lessons Learned

- Strategic public investments catalyzed "cluster" of end-users.
- Flexibility by Forest Service in administering contract is key.
- Incentives for reducing treatment costs built-in.
- Expectation that it takes time and funding to facilitate success



## Case Study: White Mountain Stewardship

150,000 acres -- 10 Year, Best Value Contract – True Collaboration --

- **Goals:**
  - Reduce WUI Fire Threat
  - Restore Ecosystem at landscape scale
  - **Reduce treatment costs from \$500-\$700/ac to \$200-\$300/ac**
- **Findings:**
  - **Approx 90,000 acres NEPA-approved- no appeals have been filed to date.**
  - Effects are not always localized
  - Forestry “cluster” major:
    - 450 FTE employees
    - Indirect impact: 90 FTE employees
    - Local expenditures by firms ~\$12 million/year



## We Have To Bring It All Together!

