

Biomass Supply on the Plumas National Forest

Opportunities and Challenges





Topics

- Why biomass is important to the Forest Service
- Biomass production on the PNF: historical, planned, potential
- Challenges to biomass removal
- Opportunities
- Desired condition

Why Biomass? It's about Ecological Restoration



- May 2010: Regional Forester letter outlining Leadership Intent for Ecological Restoration
 - Goal for Region 5 to “retain and reestablish ecological resilience of these lands to achieve sustainable management on our wildlands and forests and provide a broad range of ecosystem services.
 - “... achieve a collaborative and financially supported effort among forest land management agencies, private landowners, and the public to implement a large scale restoration program to accelerate the scale and pace of forest stewardship activities on both public and private lands.”

Ecological Restoration



- Managing for the future: increasing the resiliency of forested ecosystems to withstand climate change, insects/disease, and wildfire



Importance of Biomass to Ecological Restoration



- Urgent need to treat small-diameter fuels
 - Wildlife habitat
 - Watershed health
 - Water quality: Feather River watershed is crucial to California's water supply
 - Public safety and protection of property



Biomass Supply on the Plumas National Forest



- Tahoe Region CROP Study 2007
 - Plumas National Forest contributed 37% of 5-year total for the Tahoe Region 2002-2006: 194,375 gT (avg. = 38,875/yr) second only to the El Dorado NF
 - 8 National Forests + BLM and State lands analyzed
- Actual awarded biomass volume 2002 through 2009: 303,000 gT/avg. = 37,875/yr
- Projections for 2010 – 2012, current Program of Work: over 460,000 gT, with additional projects in the pipeline for 2013 and beyond.



Challenges

The supply is out there,
but....

- Is the annual output reasonably level and reliable?
- Is it economical?
- Is there demand?
- Is there infrastructure for harvest, transportation and processing?





Challenges

- Dependable annual supply is an issue
- 2002-2009 awarded biomass ranged from a high of 123,500 gT (2005) to a low of 672 (2009)
- Factors in uneven supply:
 - Market/economics
 - Litigation
- Key litigation point in Sierra Nevada is removal of large trees (>20" DBH), not biomass, but sawlogs are needed to help economics of a project due to low value of biomass
 - Low value = high treatment costs = fewer acres treated
 - Some national environmental groups oppose biomass product removal from National Forests



Challenges

- Economics: example
 - Biomass sale with 20 gT/acre
 - Appraisal cost: \$800-\$1,000 per acre to cut, skid, chip and haul
 - Product value only pays about half of this
 - Transportation costs: haul distance is key
 - Sawlogs can subsidize removal of biomass
 - Limited by market conditions and litigation
 - Relying on sawlogs may not always get us to the small fuels that most urgently need treatment



Challenges

- Transportation
 - Only 3 percent to biomass volume on the Plumas lack existing road access (CROP study). However:
 - This does not take into account steep terrain and road conditions
 - Many areas are not accessible without road reconstruction or realignment to accommodate traditional chip vans
 - Long haul distances for many projects on PNF lands
 - Transportation is part of the “green energy” challenge: do biomass projects replace more fossil fuels than they use?
- Infrastructure
 - Can additional facilities decrease transportation costs, increase options for biomass utilization and still maintain existing facilities?



Opportunities

- Increased interest (and funding opportunities) locally/regionally/nationally
- Near-term: plans to test alternative transportation vehicles locally
- Feasibility studies for biomass utilization technologies in Plumas and Butte Counties, from compost to biofuels
- Multiple opportunities for collaboration and partnerships

Desired Condition



- Healthy Forests
- Healthy Watersheds
- Healthy Communities
 - Jobs!
- Clean Water
- Reduced Wildfire Risk

