

BIOMASS in the Sierra Nevada

A Case for Healthy Forests and Rural Economies





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The Role of Fire

Fire-suppressed Forest

Ecologically managed Forest

- Produces less water downstream of the watershed
- Produces more GHG emissions and particulate emissions when it burns
- Stores less carbon
 after burning







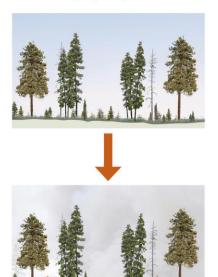


Illustration © The Nature Conservancy

- Produces more water downstream of the watershed
- Burns at a lower intensity (easier to manage)
- Stores more carbon longer after burning



Ecological Forestry Produces Biomass...



...a lot of it.



What do we do with all of that material?



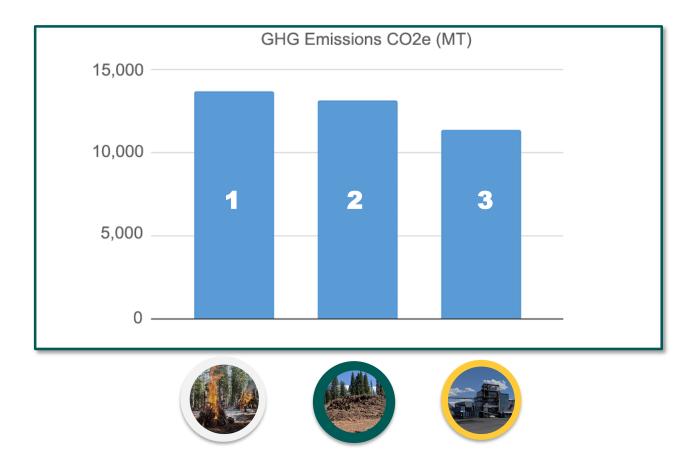
248 million BDT (bone dry tons) on **13.2** million acres

Mason, Bruce & Girard, Inc., The Beck Group. *High Hazard Fuels Availability Study*. Contract #C9333, Portland, OR: Prepared for The High Hazard Fuel Study Committee and PG&E, Natural Resource Management, June 13, 2019.



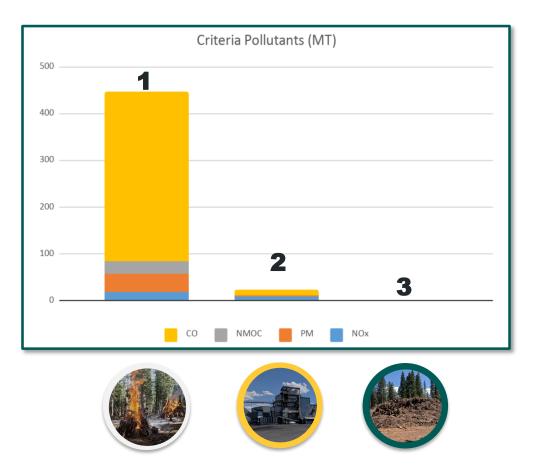
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Emissions Profiles





Criteria Pollutants





CO-BENEFITS of BIOMASS

Reduced wildfire risk

WHRONNEW TAL Increased fire resilience

Improved watershed quality

Reduced particulate emissions during wildfire

Net carbon sink forests

ECONONIC **Reduced wildfire** suppression costs

Employment opportunities in rural communities

Increased hydropower generation downstream

Help offset cost of publicly funded restoration

SOCIAL

Reduced wildfire risk

High paying, year round jobs in natural resource communities

Baseload power generation

Improved air quality



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BIOMASS ENERGY UTILIZATION

20MW SYSTEM

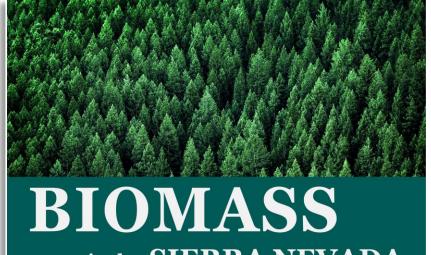
Provides electricity for the grid and local waste heat

15KW SYSTEM

windha

Provides for heating and hot water requirements

RENEWABLE ENERGY



in the SIERRA NEVADA

A Case for Healthy Forests and Rural Economies November 2019



COMPREHENSIVE PUBLICATION

GOALS

- Educate undecided decision makers
- Mobilize coalition of messengers
- Shift public policy to support biomass utilization and added value wood products

KEY MESSAGES

- Reduce wildfire risk
- Restore forests
- Create jobs

TARGET AUDIENCES

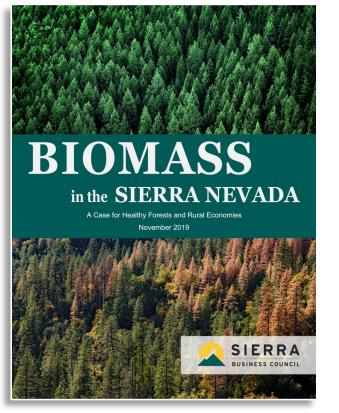
- Legislators, their staff, and state agencies
- NGO Environmental justice, media, environmental orgs
- Communities with assets that will be impacted by the implementation of these policies

STATEWIDE MEDIA OUTREACH CAMPAIGN



Key Points

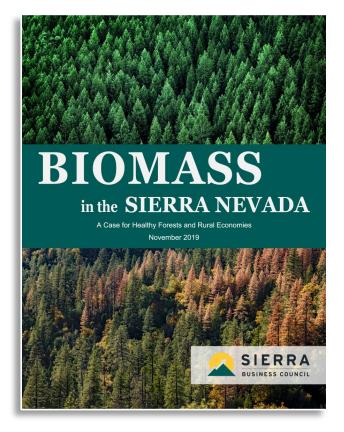
- Wildfire is a massive issue in the state of CA.
- There is not enough state and federal funding to cover the forest restoration need.
- Biomass energy utilization (and added value wood products) offer a market mechanism to finance forest restoration.
- Biomass energy is dispatchable and a necessary part of the state's renewables mix.
- The cost of inaction is too high.





How's it going?

- Joint Institute for Wood Product Innovation
 cited the publication
- Brought to the Joint Legislative Committee on Climate Change Policies
- Bi-partisan appeal
- Environment justice





QUESTIONS?



