

CAL FIRE Quarterly Update

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Research on Statewide Deployment of the CARIBOU Technology

In addition to its wildfire risk management goals, the [California Wildfire and Forest Resilience Action Plan](#) emphasizes the need to “develop pilot programs in ... biomass processing.”

To support CAL FIRE’s interest in extending forest biomass conversion across the state, BEAR is researching opportunities for gasification technology to improve local

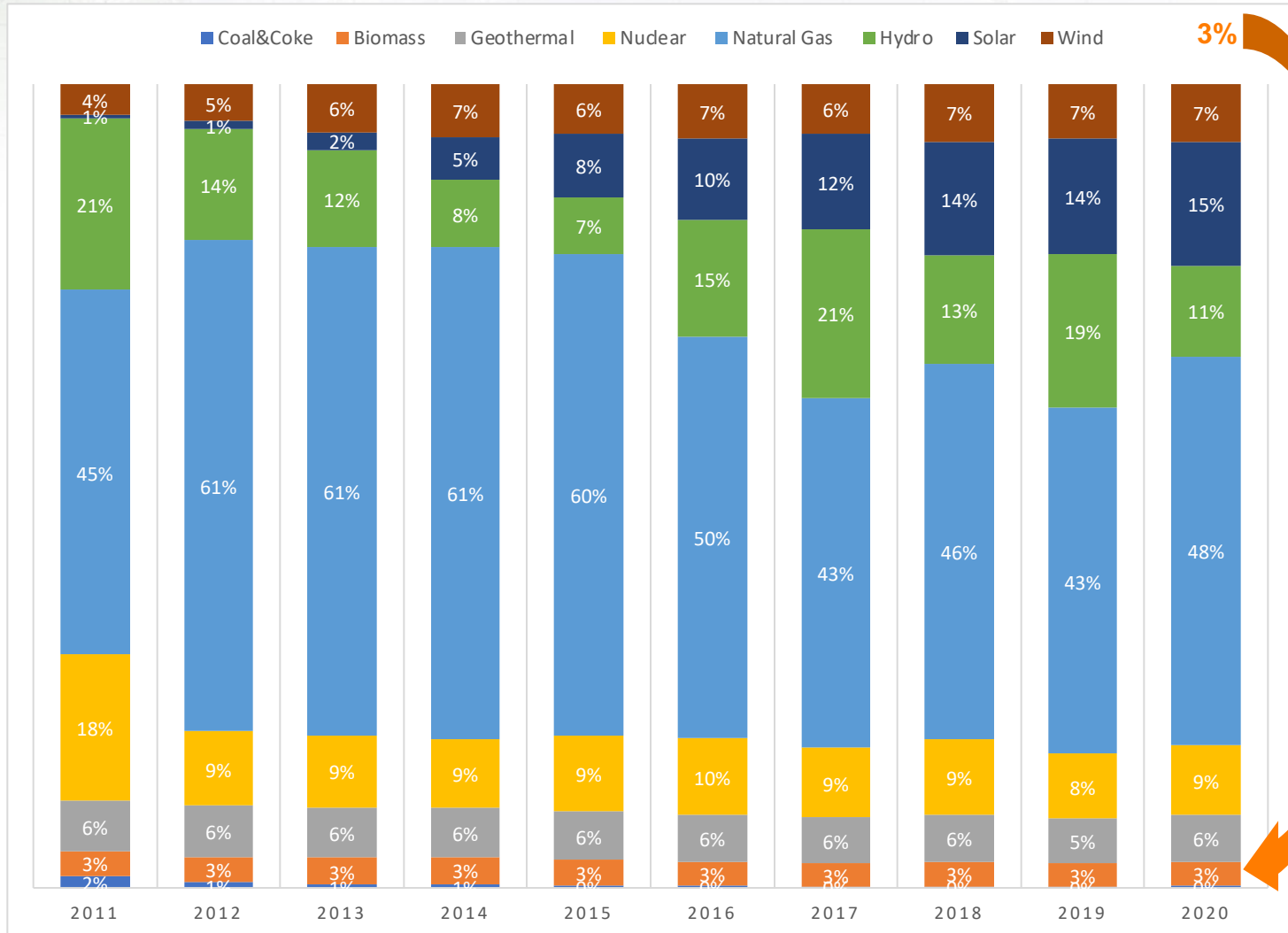
- Biomass waste management
- Energy self-sufficiency
- Economic growth and employment
- Public health



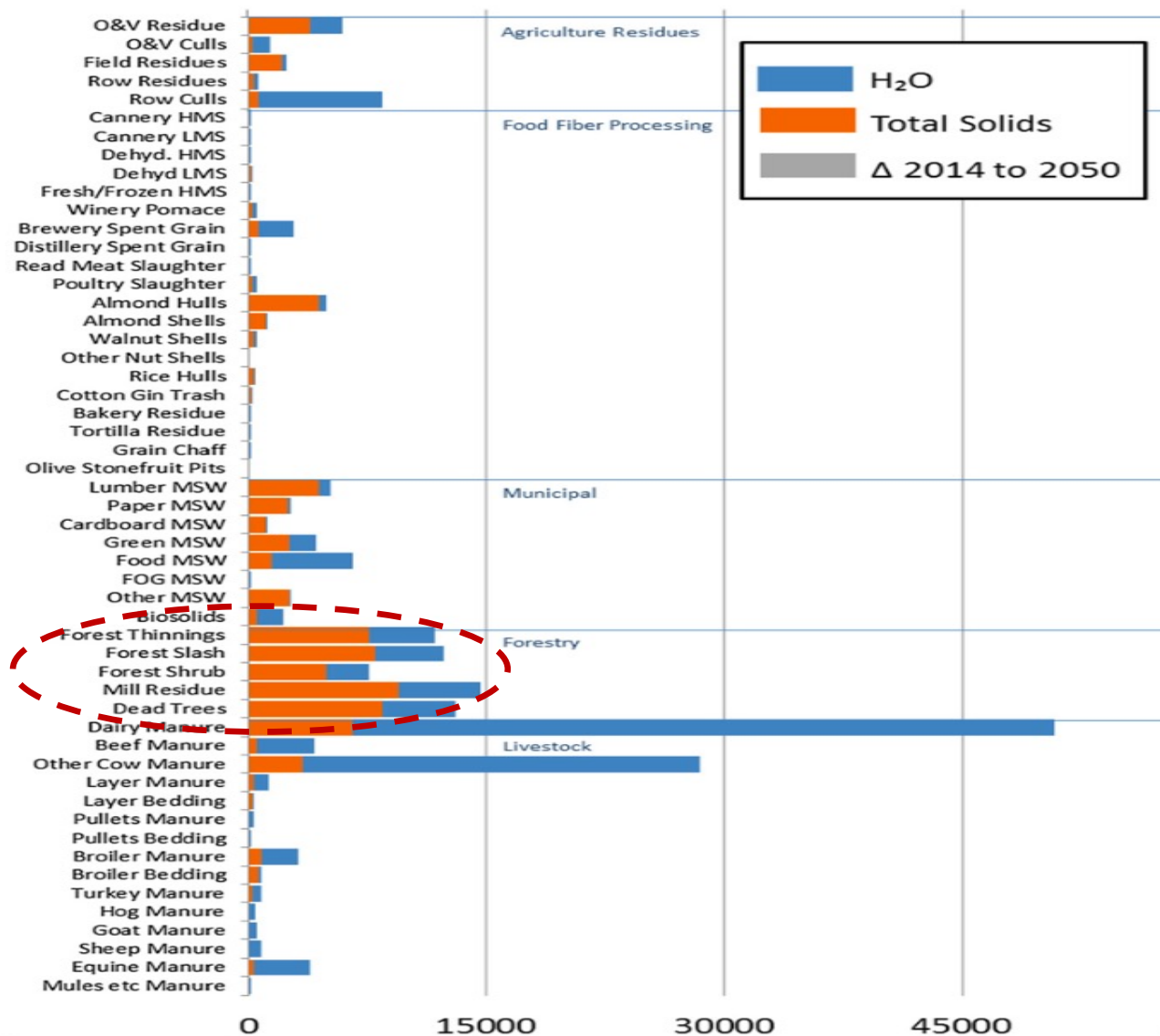
Finding Opportunities for Local Bioenergy Conversion

- In the interest of advancing the state's economic and ecological stewardship goals, BEAR has begun working to identify eligible locations for deployment of local bioenergy conversion technology.
- Basic standards for this would include:
 - Disadvantaged Community status
 - Substantial and sustained per capita local woody biomass flows

Bioenergy is Far Below Its Potential: California's Electric Power Mix

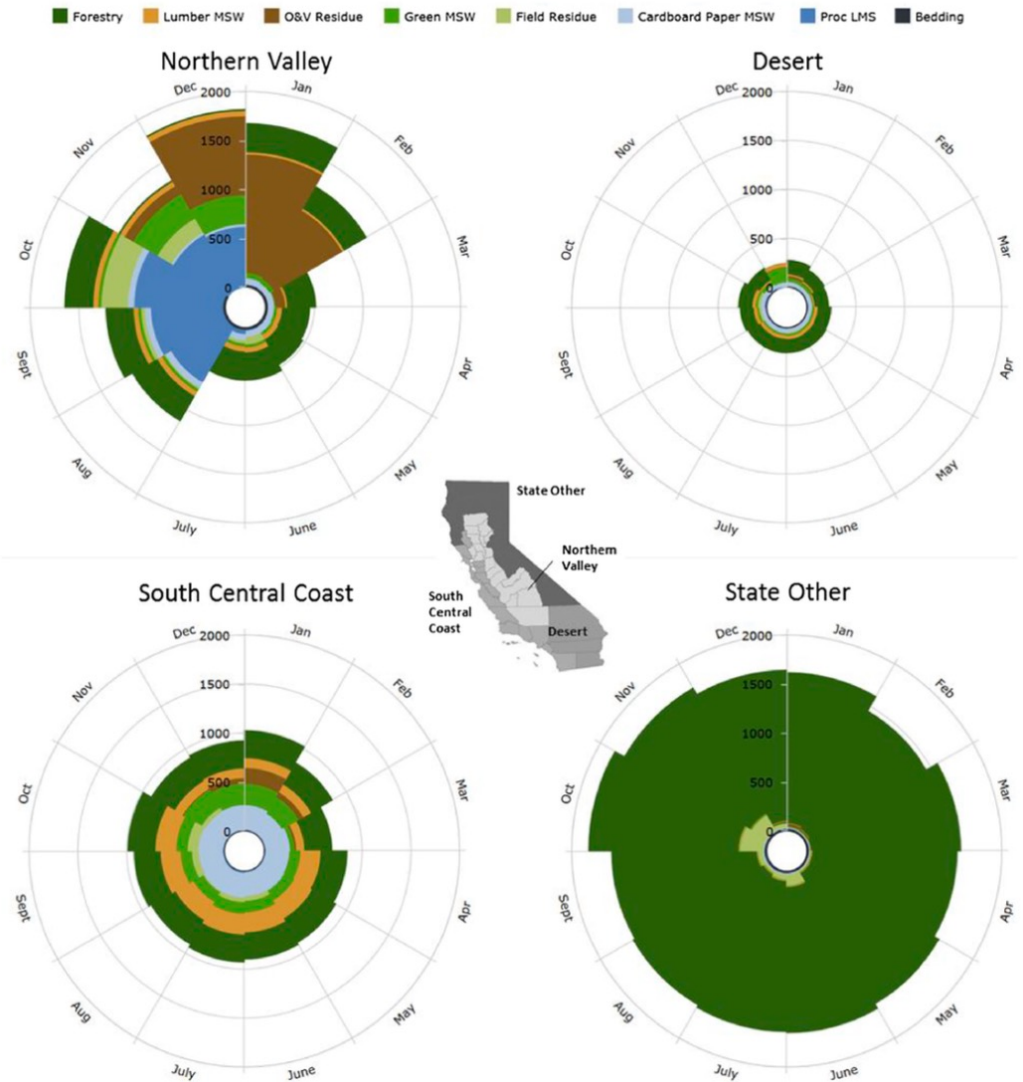


Forest Residues are the Leading Biomass Feedstock in California

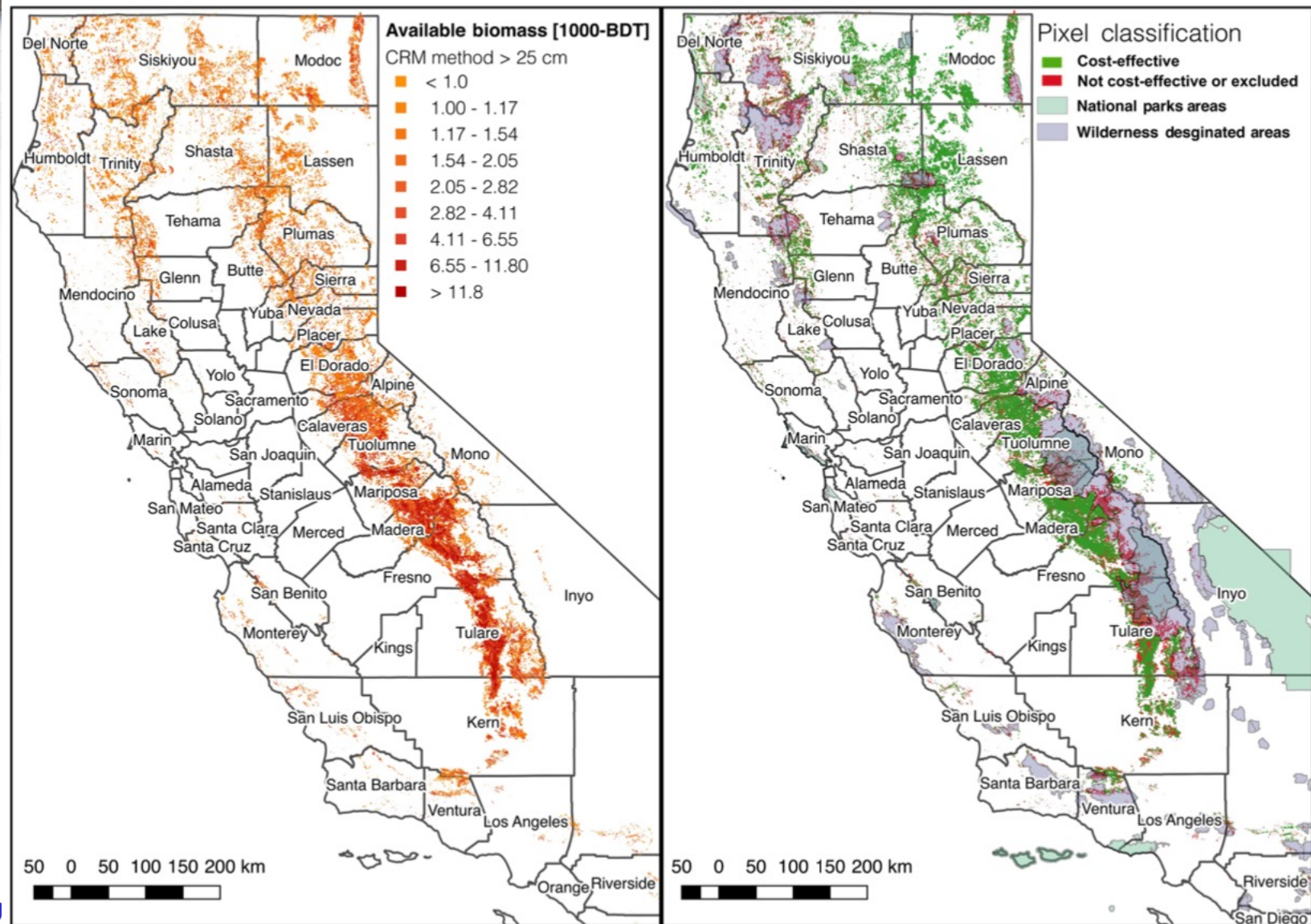


Where and When: Low Moisture Biomass Feedstocks

Monthly production of low-moisture biomass residue grouped by regions with similar seasonality (thousand BDT/y).

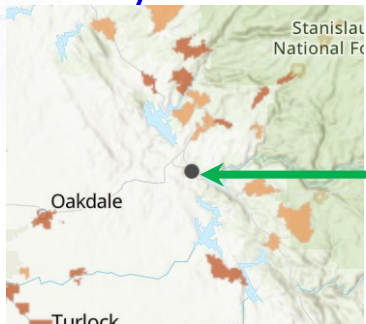


High Priority: Dead Wood Biomass from 2012-17 Drought

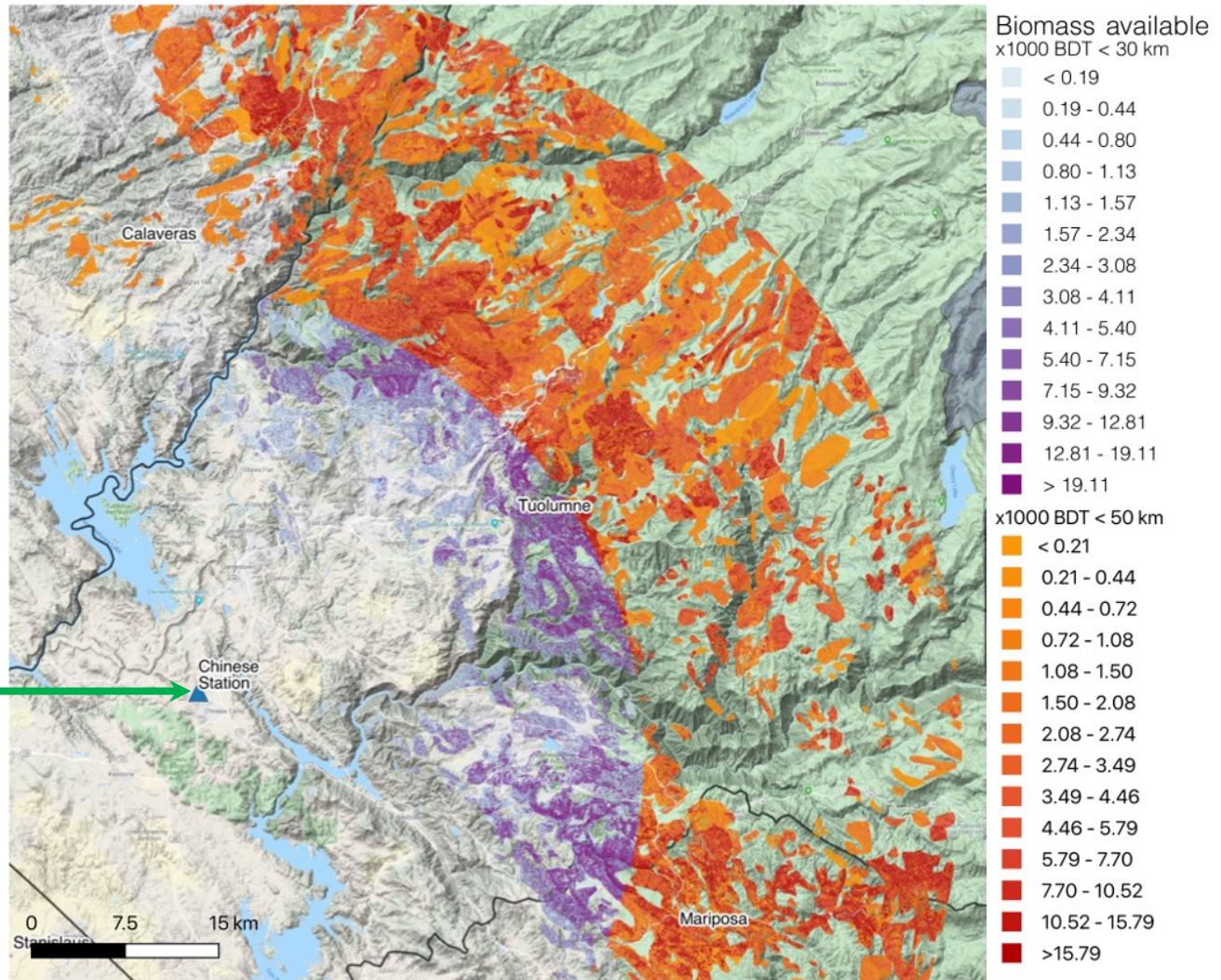


Targeting Local Bioenergy Conversion by Resource Potential

Standing Dead (SD), mature (DBH>25cm) Forest Biomass within 30km (purple) and 50km (red) of Chinese Station, a DAC with a 25MW biomass facility.

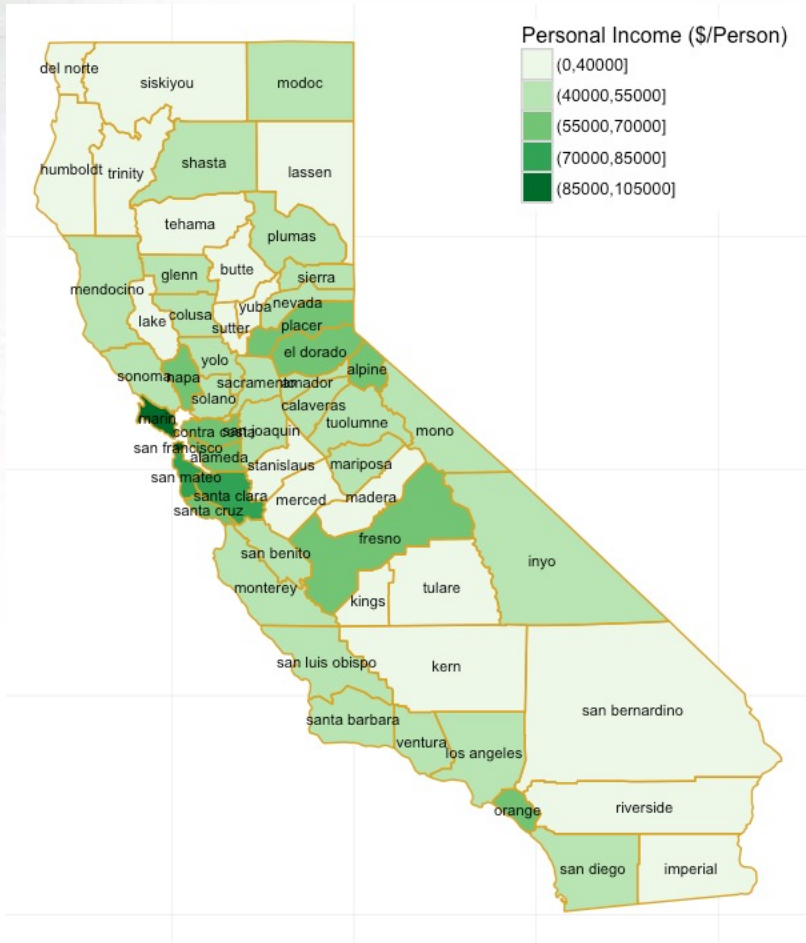


Source: Rendering with QGIS, data from USFS [Aerial Detection Services](#)

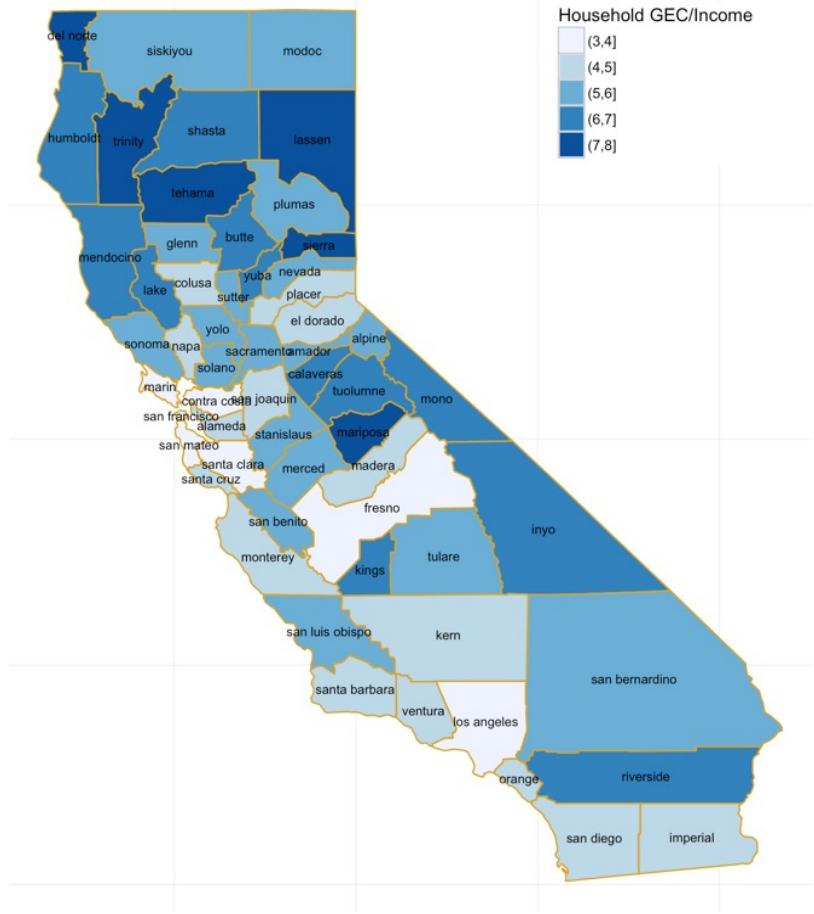


Economics of Bioenergy Location: Income and Energy Cost

Personal Income per Household

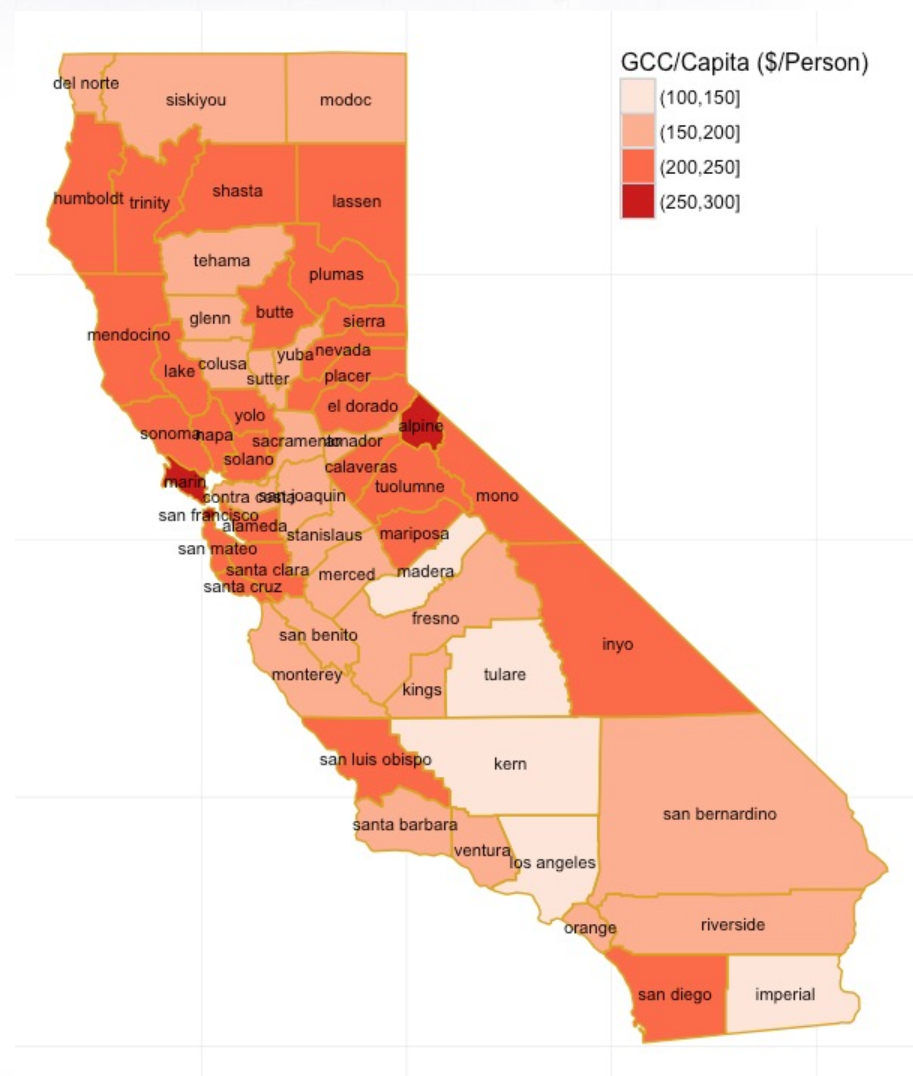


Household Energy Cost as a Percent of Income



Household Carbon Costs

- What a carbon tax would do to household incomes
- With current energy fuel mix



Bioenergy “Comparative Advantage” by California county

