**CED3: Woody Biomass and Forest Products Advisor**

**DESCRIPTION**

This position will serve the wood products industry in Siskiyou, Shasta, and Trinity counties. The general disciplinary focus of this position is Woody Feedstock Aggregation and Biomass Manufacturing. There are over 3 million acres of productive forest land in the Northern Sierra, much of which is densely stocked and vulnerable to wildfire. Forest management has not kept pace with the growing wildfire risk, in part, because of the lack of markets for woody biomass. There are many opportunities for increasing the utilization of low value forest products in the region including wood chips, firewood, post and poles, mass timber, advanced bioenergy, wood pellets, wood shavings and biochar.

The advisor is responsible for the assessment, development, implementation, and evaluation of educational and research programs that will have significant impacts on increasing the use of woody biomass in the region. This position will assist local forestland owners, processors, and marketers to increase use of wood products. The advisor will collaboratively develop and disseminate science-based practices for wood utilization, including niche production, marketing, resource sustainability, and appropriate-scale equipment and technology.

Qualified candidates will have the preferred educational and professional background in economic development and a minimum of a master’s degree in community development, forestry, manufacturing, engineering, design, or related fields. Experience working in woody biomass production systems such as engineered wood products, wood science, biomass energy or advanced manufacturing is highly desirable.

This position will report to the County Director and will interact internally with the UCANR Forestry and Community Development Advisors, Forestry Workgroup, the Woody Biomass Utilization Group, and statewide programs such as the Forest Stewardship program, the Forestry and Range Program Team, California Naturalist program.

**JUSTIFICATION**

While ANR has long had a focus in technical fields such as agronomy, forestry, natural resources, and environment-related issues such as agricultural pests, climate change, fire, etc, as well as a focus on community development and rural assistance, these two areas have tended to work separately. Given increasing pressure on communities to reduce fuels and make themselves firesafe due to climate change and increased fire threat, it is important to integrate ANR's forestry/natural resources and community development efforts to better ensure long-term community resiliency, particularly in forested communities of California.

This advisor would focus on providing technical assistance for community scaled vegetation management and natural resources manufacturing enhancing both private industry biomass utilization and long-term community resiliency in the face of a changing climate and pressure on keeping communities safe in the face of increased wildfire. Sustainable resource management and restoration in California will not succeed without investment in the wood utilization infrastructure and development of markets that will increase the value of low-value wood products.

The advisor will serve as the regional lead for integrating biomass vegetation management work and community resilience. High priority subject areas include connecting natural resources professionals to private industry and evaluating its impact on community development and resiliency. The advisor will be expected to work cooperatively with the state of California including the Office of Planning and Research, CalFire, the Joint Institute on Wood Products Innovation, community water groups, UC investigators, and other relevant agencies to 1) provide technical assistance for community vegetation management towards biomass business and wood products innovation 2) provide technical assistance for communities to meet local and regional regulatory forest management program goals (such as air quality regulations, governing biomass conversion, and manufacturing) and 3) create collaborative synergistic relationships with local and non-governmental partners.

This position will contribute to UC ANR's goals of 1) promoting economic prosperity in California, particularly through enhanced community economic development, 2) protecting California’s natural resources through increased community vegetation management, connecting industries to biomass and wood product projects, and 3) building climate-resilient communities and ecosystems.

**EXTENSION**

The position will be expected to work in partnership with organizations involved in agriculture, community development, and environmental justice, take an active role in public outreach, and develop strong collaborations with key community groups and other non-governmental organizations. The advisor will collaborate with UCCE Advisors and Specialists, as well as other UC and CSU system academics, and USDA-ARS researchers.

**RESEARCH**

The candidate would address key questions in areas such as the following: 1. How do sustainable, climate smart forestry practices increase community resilience? 2. How do investments in sustainable, values-based supply chains, wood products businesses and biomass industries impact the regional economy? 3. How can local/regional/state policies be designed to better promote utilization and manufacture of high-value biobased products? The candidate will need the skills and competencies to cross disparate research fields, to address critical issues that will ensure the long-term resiliency of rural/urban/other communities.

**ANR NETWORK**

The advisor will work with UC ANR networks that encompass several fields including the Woody Biomass Utilization group (https://ucanr.edu/WoodyBiomass/). The group is an outgrowth of the former University of California Forest Products Laboratory (UCFPL) which has worked on the properties, mechanical processing, durability, and chemical processing of commercial species for over 50 years. The group has funding from the [California Department of Forestry](http://calfire.ca.gov/resource_mgt/resource_mgt_EPRP_biomass.php) and the [US Forest Service – Region 5 State and Private Forestry](http://www.fs.usda.gov/main/r5/communityforests) to improve the capacity and markets for wood biomass utilization, improve hazardous fuels removal technologies and r[esearch the commercialization of bioenergy with carbon capture and storage](https://www.researchgate.net/publication/290218803_A_commercialization_strategy_for_carbon-negative_energy).

The advisor will also work with the California Communities Program Team, and the Forest and Rangeland Systems Program Team. This position will be supported by UCCE specialists in Community Economic Development at UC Davis (Keith Taylor), Forest Economics (Bill Stewart) and Woody Biomass (Dan Sanchez) at UC Berkeley. AES researchers at UC Davis (Agriculture & Resource Economics, and Agriculture Sustainability Institute), and UC Berkeley Department of Agriculture & Resource Economics, and Environmental Science, Policy and Management will be important collaborators. This advisor will complement the programs of other advisors currently working on fire, natural resources and CED.

**EXTERNAL NETWORK**

The advisor will interact with a variety of stakeholders including county and regional wood products firms, Karuk Tribal Nation, Blue Mountain, etc. The advisor will also work with county based economic development organizations and government agencies such as USDA’s Forest Service. Other partners will include the National Resources Conservation Service, USDA Farm Service Agency, Resource Conservation Districts, and county Agricultural Commissioners. Non-profits working on increasing the potential include the Sierra Institute and Blue Forest Foundation. There is also a very strong network of forest collaboratives across the region that has advocated for increased fuels reduction work and woody biomass utilization. The advisor will also work with local community development agencies such as the Sierra Business Council. The advisor will collaborate with these partners providing expertise and support for further expanding woody biomass economic opportunities throughout the region.

Additional non-UCANR academics with a potential for collaboration include Kevin Fingerman from Humboldt State University, Aindrila Mukhopadhyay from the Joint BioEnergy Institute (JBEI), George Peridas from Lawrence Livermore National Laboratory.

**SUPPORT**

The advisor will be provided with an office, telephone, high speed wireless internet access, storage space, office supplies, clerical and administrative support.

**OTHER SUPPORT**

Sierra Business Council, USDA, EDA, ANR competitive grants and local community groups. Program support will come from UC ANR general funds.

**HEADQUARTERS AND COVERAGE AREA**

This position will be in Siskiyou County and also serve Shasta and Trinity Counties.

**DEVELOPED AND PROPOSED BY**

Daniel Sanchez (UCCE Specialist, UC Berkeley), Glenda Humiston (UCANR Vice President), Yana Valachovic (UCCE Humboldt County Director), Bill Tripp (Director of Natural Resources, Karuk Tribe), Karen Gaffney (CEO West Coast Watersheds)