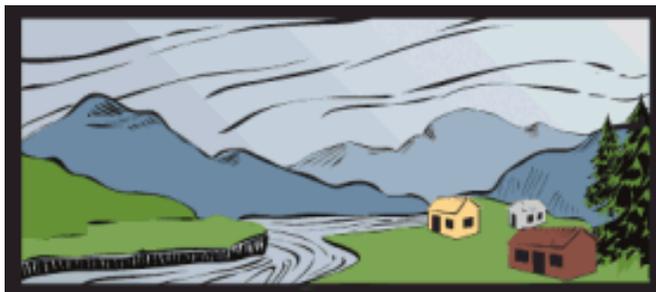


# **Bioenergy Project Site Review for Select Sites in Mendocino County**

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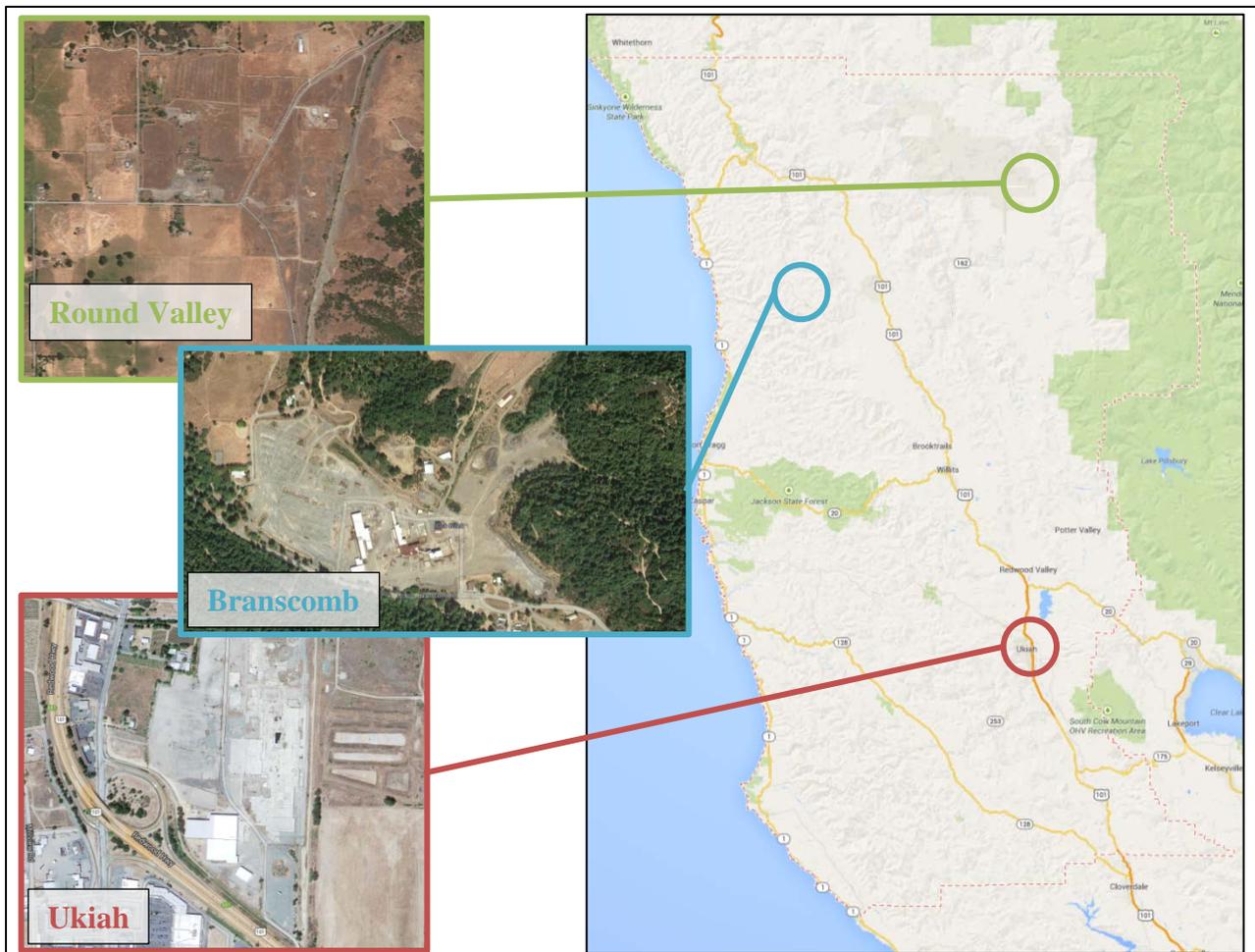
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## Introduction

The Mendocino County Woody Biomass Work Group (MCWBWG), funded by the Watershed Resource and Training Center, is pursuing bioenergy project siting options for excess forest biomass generated as a result of forest restoration and hazardous fuels removal projects within Mendocino County. TSS Consultants (TSS) conducted a countywide forest biomass utilization feasibility study in 2006 and found forest feedstock sustainably available to support approximately 20 MW of baseload power generation. In addition to renewable power generation, there are other value-added options, including but not limited to thermal energy, soil amendment, post and poles, firewood, and biochar.

The MCWBWG has selected three sites for review (Figure 1): Round Valley (Covelo), Branscomb, and Ukiah. TSS and the MCWBWG have worked in partnership to review key site attributes at each of the three sites to better understand where to focus for more detailed assessment.

**Figure 1. Site Locations**



## Site Review Process

TSS developed a site review matrix to assist the MCWBWG in identifying key attributes of the potential project sites (Table 1). The findings from the completion of the matrix will be the basis for understanding where to focus continued efforts.

**Table 1. Site Review Matrix**

SITE STATUS	INFORMATION SOURCES	COMMENTS
<b>Current Land Use Zoning</b>	Mendocino Planning Department <a href="#">Mendocino Parcel Zoning Lookup</a>	Preferred Zoning: Any of the 4 Industrial Use Types. <a href="#">Mendocino Zoning Code</a>
<b>Environmental Clean Up</b>	Cal EPA / Mendocino County <a href="#">GeoTracker - Branscomb</a> , <a href="#">GeoTracker - Ukiah</a> , <a href="#">GeoTracker – Round Valley</a>	Environmental remediation can be very expensive and could greatly hinder project development efforts. Ideal site has already been remediated and had the appropriate studies performed.
<b>Proximity to Residences</b>	Google Maps <a href="#">Google Maps</a>	This is an important aspect of community support and can be factored into CEQA and air permitting. Noise, dust, and traffic may be issues of concern.
<b>Community Support</b>	Fire Safe Council. Biomass Work Group, Local Knowledge of Communities <a href="#">Mendocino Fire Safe Council</a> , <a href="#">Mendocino Biomass Work Group</a>	This is an important local perspective, as some communities may be more open to this type of development than others.
<b>Road Infrastructure/ Site Access</b>	<a href="#">Mendocino Department of Transportation</a>	Can tractor trailers access the site? Would there be any turning issues? Is there sufficient line of site for truck traffic to safely enter and exit the site?
<b>Grid Stability/ Infrastructure</b>	<a href="#">PG&amp;E Solar RAM Map Site</a> (scroll down for the link over the “FAQ” heading, must sign in with a free account)	Looking for a high Projected Peak Load and a high Total Distributed Generation number.
<b>Water Supply/ Discharge</b>	Local Water Utility District & Local Wastewater Treatment Facility	While water demand for bioenergy processes may vary significantly by technology, water demand for fire safety is significant for these developments.
<b>Site Conditions</b>	Site Visit	Is the site graded? Are there any known soil conditions? Are there any adjacent uses (school, community buildings, etc.)?
<b>Potential Value-Added Operations</b>	Local Knowledge of Contractors and Local Entrepreneurs	Collocation of heat or electricity off-takers provides additional revenue, thus improving project financial performance. Collocation of value-added products manufacturing (e.g., post/poles, compost/mulch, firewood).
<b>Proximity to Biomass Feedstocks</b>	<a href="#">National Forest Maps</a> & County Land Ownership Maps	Is there a nearby transfer station? Orchard operations? Private/federal forest landownership under active management?
<b>Site Availability</b>	Contact Current Ownership regarding the status of the property	Is the site available for purchase or lease?
<b>New Market Tax Credits (NMTC)</b>	<a href="#">NMTC Maps</a>	Search by address or zip code. New Market Tax Credits can provide additional funding opportunities.
<b>Enterprise Zones</b>	<a href="#">Enterprise Zone Maps</a>	Search by address or zip code. Enterprise Zones can provide tax incentives.
<b>Recycling Market Development Zone (RMDZ)</b>	<a href="#">RMDZ Zone Map</a>	Can facilitate low-interest loans, technical assistance and free product marketing.

Categories shown in Table 1 fall into three main groups: permitting, infrastructure, and financing. The information from these three categories will develop an understanding of the additional pre-development work that may have to occur to prepare a potential site for bioenergy development.

- Permitting
  - Current Land Use Zoning
  - Environmental Clean Up Status
  - Proximity to Residences
  - Community Support
- Infrastructure
  - Road Infrastructure/Site Access
  - Grid Stability/Infrastructure
  - Water Supply/Discharge
  - Site Conditions
  - Potential Value-Added Operations
- Financing
  - Proximity to Biomass Feedstock
  - Site Availability
  - New Market Tax Credits
  - Enterprise Zones
  - Recycling Market Development Zone

## **Site Review and Observations**

The MCWBWG used the site review matrix framework to gather data about the three potential sites. TSS used the data provided by MCWBWG to develop Table 2. With the data, TSS ranked each of the attributes on a scale from 0 (least ideal) to 3 (most ideal). Each attribute was ranked independently of the other attributes and the other sites. Un-weighted scores were totaled, and the results indicated that the Round Valley site is preferred with a score of 29 out of 42. The Branscomb and Ukiah sites tied in second position with a score of 27 out of 42.

Advantages of the Round Valley site include completed environmental cleanup and collocated wood industry enterprises. Advantages of the Branscomb site include environmental cleanup status, the potential use of the fire pond, and site availability. Advantages of the Ukiah site include better interconnection opportunities and more conducive zoning of neighboring parcels.

**Table 2. Completed Site Review Matrix**

<b>SITE STATUS</b>	<b>SITE 1: BRANSCOMB</b>	<b>SITE 2: UKIAH</b>	<b>SITE 3: ROUND VALLEY</b>
<b>Current Land Use Zoning</b>	Industrial (2)	Industrial (2)	Industrial (2)
<b>Environmental Clean Up</b>	Remediation Complete, Monitoring in Process (2)	In Progress (1)	Complete (3)
<b>Proximity to Residences</b>	Low-Density Residential Contiguous (1)	Commercial, Ag, Industrial Contiguous (2)	Low-Density Residential Contiguous (1)
<b>Community Support</b>	Supportive Community (3)	Majority Supporting (2)	Concerned but Receptive Community (2)
<b>Road Infrastructure/ Site Access</b>	Easy Access (3)	Easy Access (3)	Easy Access (3)
<b>Grid Stability/ Infrastructure</b>	Projected Peak Load: 2.6 MW (1)	2 Circuits – Projected Peak Load: 3.1 MW or 7.9 MW (2)	Projected Peak Load: 2.8 MW (1)
<b>Water Supply/ Discharge</b>	Fire Pond, Spring Box, and Eel River Access (2)	Wells, Access to Russian River, District Access (2)	Round Valley County Water District, Mill Ponds (2)
<b>Site Conditions</b>	60 Acres: Pavement, Rock, and Cement (3)	Mostly Concrete (3)	Pavement and Gravel (3)
<b>Potential Value-Added Operations</b>	Potential for Sawmill, Log Yard, Compost, Firewood, Greenhouse (0)	None onsite (0)	Neighboring Wood Products Businesses (2)
<b>Proximity to Biomass Feedstocks</b>	Surrounded by Forested Area (2)	On Haul Route from Forest Land (2)	Surrounded by Forested Area with Collocated Businesses (3)
<b>Site Availability</b>	Available for Lease or Purchase (2)	For sale, multiple parcels (1)	May be available for lease or purchase (1)
<b>Potential for New Market Tax Credits (NMTC)</b>	Qualifies (3)	Qualifies (3)	Qualifies (3)
<b>Enterprise Zones</b>	None (0)	None (0)	None (0)
<b>Recycling Market Development Zone (RMDZ)</b>	Yes (3)	Yes (3)	Yes (3)
<b>TOTALS</b>	27 of 42	27 of 42	29 of 42

## Recommendations and Next Steps

In support of continued development of bioenergy project opportunities in Mendocino County, TSS recommends the following next steps for consideration.

- Identify potential project partners and realistic business plans, financing options, and community involvement in the new bioenergy enterprise;
- Continue discussions with the site owners to keep track of site availability;
- Select targeted project site based on resources, owner interest, community interest, and other opportunity factors;
- Conduct targeted feedstock availability analysis and prepare procurement plan to confirm the availability and price of woody biomass tributary to selected site;
- Prepare feasibility study reviewing the environmental permitting process, technology selection, and financial analysis compliant with relevant funding opportunities;
- Promote and encourage additional value-added wood products enterprises locating at the target site; and
- Develop a communications plan for targeted outreach to the community.

Funding opportunities for woody biomass projects include:<sup>1</sup>

### Capacity Building, Collaboration, Outreach and Organizational Development

- USDA Rural Community Development Initiative ([www.rurdev.usda.gov/had-rcdi\\_grants.html](http://www.rurdev.usda.gov/had-rcdi_grants.html)):  
*Developing capacity of community organizations to undertake development projects, providing training and resource materials on planning, operations, management, financial systems, and information technology.*
- NFF Community Capacity and Land Stewardship Program ([www.nationalforests.org/consERVE/grantprograms/capacitybuilding/ccls](http://www.nationalforests.org/consERVE/grantprograms/capacitybuilding/ccls)):  
*Grant funds can be used for community outreach that helps support a collaborative group, including workshops, training, and contracting. Assist community-based nonprofit organizations and collaborative groups in project development, implementation, monitoring, organizational and staff supporting, including facilitation, technical assistance, and shared learning.*

### Pre-Feasibility Assessment, Feasibility Studies, and Other Planning

- USDA Rural Business Enterprise Grant Program ([www.rurdev.usda.gov/bcp\\_rbeg.html](http://www.rurdev.usda.gov/bcp_rbeg.html)):  
*Technical assistance for private business enterprises, such as market research, product and/or service improvement, feasibility studies, etc.*

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<sup>1</sup> Courtesy of the Sierra Nevada Conservancy

- HUD Community Development Block Grant Planning ([www.hcd.ca.gov/fa/cdbg/index.html](http://www.hcd.ca.gov/fa/cdbg/index.html)):  
*Studies and plans for economic development activities that meet CDBG national objectives and provide principal benefit to low-income persons.*
- State Wood Energy Team Small Grants ([http://ucanr.edu/sites/swet/Documents\\_728/](http://ucanr.edu/sites/swet/Documents_728/)):  
*Pre-feasibility assessments and resources in support of community-scale bioenergy projects.*
- USDA Development Value Added Producer Grants ([www.rurdev.usda.gov/BCP\\_VAPG.html](http://www.rurdev.usda.gov/BCP_VAPG.html)):  
*Grant funds can be used for eligible economic planning activities, or for eligible working capital expenses. Economic planning activities include conducting feasibility studies and developing business plans for processing and marketing of the proposed value-added product. Eligible working capital expenses include processing costs, marketing and advertising expenses, and some inventory and salary expenses directly related to your value-added project. This is only available if applicant owns the agricultural inputs (the forest from which the biomass is derived.)*

#### Pre-Development

- US Forest Service Woody Biomass Utilization Grants ([http://ucanr.edu/sites/WoodyBiomass/Grants\\_2/Woody\\_Biomass\\_Utilization\\_Grant/](http://ucanr.edu/sites/WoodyBiomass/Grants_2/Woody_Biomass_Utilization_Grant/)):  
*Funds must be used to further the planning of wood energy projects by funding the engineering services necessary for final design and cost analysis.*

#### Research and Demonstration

- California Energy Commission Electric Program Investment Charge (EPIC) ([www.energy.ca.gov/research/upcoming\\_funding.html](http://www.energy.ca.gov/research/upcoming_funding.html)):  
*Still being determined; however, typically focuses on the demonstration and deployment of clean energy projects.*

#### Implementation and Finance

- USDA Rural Development Renewable Energy and Efficiency Program ([www.rurdev.usda.gov/BCP\\_Reap.html](http://www.rurdev.usda.gov/BCP_Reap.html)):  
*Grant to purchase renewable energy systems and make energy efficiency improvements, renewable energy projects include those for which energy is derived from wind, solar, biomass, geothermal, or for which hydrogen is derived from biomass or water using the previously stated energy sources.*
- USDA Rural Development Renewable Energy and Efficiency Loan Guarantee Program ([www.rurdev.usda.gov/BCP\\_Reap.html](http://www.rurdev.usda.gov/BCP_Reap.html)):  
*Loan to purchase renewable energy systems and make energy efficiency improvements, renewable energy projects include those for which energy is derived from wind, solar, biomass, geothermal, or for which hydrogen is derived from biomass or water using the previously stated energy sources.*

- USDA Rural Development Business and Industry Guaranteed Loan Program  
([www.rurdev.usda.gov/BCP\\_gar.html](http://www.rurdev.usda.gov/BCP_gar.html)):  
*To improve, develop, or finance business, industry, and employment and improve the economic and environmental climate in rural communities.*
- California Public Utilities Commission Self-Generation Incentive Program (SGIP)  
([www.cpuc.ca.gov/PUC/energy/DistGen/sgip/](http://www.cpuc.ca.gov/PUC/energy/DistGen/sgip/)):  
*Provides financial incentives for the installation of new, qualifying self-generation equipment installed to meet all or a portion of the electric energy needs of a facility.*
- California Treasurer’s Office CAEATFA Advanced Transportation and Alternative Source Manufacturing Sales and Use Tax Exclusion Program  
([www.treasurer.ca.gov/caeatfa/](http://www.treasurer.ca.gov/caeatfa/)):  
*Sales and use tax exclusions for eligible purchase of qualified property utilized for the design, manufacture, production or assembly of advanced transportation technologies or alternative source products, components, or systems.*
- California Treasurer’s Office California Pollution Control Financing Authority  
([www.treasurer.ca.gov/cpcfafa/](http://www.treasurer.ca.gov/cpcfafa/)):  
*Provides a reduction in interest costs for project components including land, equipment, and construction.*
- New Market Tax Credits  
([www.cdfifund.gov/what\\_we\\_do/programs\\_id.asp?programID=5](http://www.cdfifund.gov/what_we_do/programs_id.asp?programID=5)):  
*Tax credits offered to eligible investors can provide financing up to 39% of a project’s original investment amount.*