



HUMBOLDT COUNTY FIRE SAFE COUNCIL
Appointed by the Humboldt County Board of Supervisors
Supported by the Planning Division of
Community Development Services
COUNTY OF HUMBOLDT
3015 H Street
Eureka, CA 95501-4484 PHONE (707) 268-3736



Meeting Summary (Action Minutes)
Humboldt County Fire Safe Council
April 12, 2010

A Humboldt County Fire Safe Council (HCFSC) meeting was held on April 12, 2010 from 12:00 P.M. to 4:00 P.M. at Blue Lake Power and the Blue Lake Fire Hall. The FSC was appointed by the Humboldt County Board of Supervisors to guide preparation and implementation of the Humboldt County Master Fire Protection Plan (Fire Plan) - Humboldt County's Community Wildfire Protection Plan.

Fire Safe Council Members Attending:

Bob Harris, Miranda Fire Protection District, Fire Chief, and Southern Humboldt Fire Chiefs' Association, President
Dan Larkin, Humboldt County Office of Emergency Services, Emergency Services Coordinator
Dave White, Humboldt County Fire Chiefs Association, Treasurer
Joe O'Hara, Willow Creek Fire Safe Council, President
John McFarland, Arcata Fire Protection District, Chief and Humboldt County Fire Chiefs' Association, President
Manny Mello, Northwest Insurance, CIC
Tim Jones, Bureau of Land Management, Fire Management Officer
Will Harling, Orleans/Somes Bar Fire Safe Council, Director
Ian Sigman, Honeydew Volunteer Fire Company and Lower Mattole Fire Safe Council

Fire Safe Council Members Absent:

Debra Lake, Fruitland Volunteer Fire Department, Board Chair
Hugh Scanlon, CAL FIRE -HUU, Battalion Chief
Lucy Salazar, USFS, Six Rivers National Forest, Fuels Management Specialist & Air Coordinator

Public and Agency Representatives Attending:

Allan Wiegman, State Parks
Andrew Nash, Mottle Restoration Council
Barbara Darst, Willow Creek Fire Safe Council
Bill Rice, District Ranger, Lower Trinity Ranger District, Six Rivers National Forest
Brad Seaberg, Blue Lake Power
Cybelle Immitt, Humboldt County Planning
George Rockwell (Rocky), Blue Lake Power
Mark Rodgers, Cal Fire
Meghan Ryan, Humboldt County Community Development Services
Pat O'Hara, Willow Creek Fire Safe Council
Paul Abbott, Willow Creek Fire Safe Council
Sonny Davi, Blue Lake Power
Stephen Underwood, State Parks
Susan Abbott, Willow Creek Fire Safe Council
Tom Smithy, Willow Creek Volunteer Fire Department

AGENDA ITEM 1: TOUR OF BLUE LAKE POWER (BIOMASS POWER PLANT) 200 TAYLOR WAY, BLUE LAKE, CA

Discussion – Participants toured the facility hosted by very gracious Blue Lake Power staff.

AGENDA ITEM 2: BROWN BAG LUNCH DISCUSSION – Q & A ABOUT BLUE LAKE POWER

Discussion – *Usefulness of this plant w/rural communities? Large landowners –*

Blue Lake Power – how long does it take to power down and up? If controlled, takes 3 hours to power down. If down for 4 hours, probably takes 10 hours to get back online. Propane burner to get gas to the plant – takes 12 hours from cold steel – only one hour to three hours if small shut down.

How small/how big does the landowner need to be? 2 – 3,000+ acres is ideal. Pick up must be economical – 40 mile radius or less – low value product, so cost is a concern.

Federal side – Forest Service hopes is to have up to 5,000 acres – do fuel reduction treatment – from commercial operations to biomass – find combination of treatments to improve forest. Forest Service is interested in this opportunity. Working together w/ small landowners might also be an option.

Average output of power – truckload an hour 95,000 – 100,000 bone dry tons – 11-13 megawatts – enough to power 10,000 homes (per 10 megawatts , 1000 watts per home) Could supply power to McKinleyville.

AGENDA ITEM 3: CALL TO ORDER AND INTRODUCTIONS

The Business meeting was called to order at 1:30 P.M.

AGENDA ITEM 4. APPROVAL OF MINUTES FROM JULY 13, 2009 FSC MEETING

Discussion – The FSC Vice Chair, **Harris**, asked if anyone had any corrections or additions in regards to the action minutes. No corrections were made.

Action – On a motion from **Joe O'Hara** and seconded by **Ian Sigman**, the Council unanimously approved the minutes.

AGENDA ITEM 5 - PUBLIC COMMENTS/ANNOUNCEMENTS/CORRESPONDENCE

- Cybelle asked attendees about their participation on Fire related listserves such as:
 - Northwest California FSC list (Nwcal – FSC)
 - Humboldt-Biomass group
 - Fire Safe Council Network – CA group

Cybelle will send out an email with information about joining these list serves and folks can decide for themselves.

- Fire Safe Council to be renewed by the Humboldt County Board of Supervisors in September – at next business meeting, **Cybelle** needs a list of what members would like to be re-appointed and who is moving on and needs a replacement. **All FSC members** - Please come prepared with that information to the next July Meeting. Provide **Cybelle** with replacement nominees if you are no longer able to represent your agency or organization.

- A call for Wildland Urban Interface grants going out in July – Contact Cal Fire.
- Trinity County Blue Dot brigade
 - **Will Harling** - Find out how Trinity is funding program and share info before next meeting – **Still looking**

AGENDA ITEM 6 - FSC COMMITTEE PROGRESS REPORTS

MASTER FIRE PROTECTION PLAN UPDATE (NEW COMMITTEE NEEDED)

Discussion:

On January 12, 2010 the Humboldt County Board of Supervisors approved the use of Title III funds to support a CWPP Project – part of this project will be to update the Humboldt County Master Fire Protection Plan which is the County's CWPP. Working on this task will begin soon and Staff is asking for a committee to be formed to provide guidance. This task could also be added to the duties of one of the existing committees.

Cybelle - Report on CWPP update at each Business meeting to the Humboldt County FSC, and then seek out who she needs help from on an as-needed basis.

1. FUEL MODIFICATION/BIOMASS UTILIZATION

(Lucy Salazar, Tim Jones, Will Harling and Joe O'Hara. Coordinator - Lucy Salazar)

Discussion:

- ❖ We are in the process of updating the fuels component of MFPP with help from a 2009 USDA grant from the CA FSC Grants Clearinghouse. The Web GIS tool (which tracks fuels reduction planning and implementation) is coming along and we are gathering data from community meetings to update the data base. A summary document needs to be drafted and the GIS tool needs to go on line by the end of June.
 - **Cybelle** – Re-send user guide to everyone for Web GIS when Jerry reposts.
- ❖ Redway - Redwood Futures Working Session (March 13, 2010):
 - **Cybelle Immitt** (Humboldt County FSC) and **Bill Eastwood** (Southern Humboldt FSC) joined the Action Team: Fire-Fuels Reduction Biomass Utilization - see attached notes.
 - **Requested action from the FSC:**
 - Review the edits to the notes suggested by the committee and direct staff to forward suggestions on to the Redwood Futures group.
 - **Action:** On a motion from **Tim Jones** and seconded by **Joe O'Hara**, the Council unanimously moved to accept these comments and direct staff to carry comments forward.
 - **Cybelle & Lucy** will keep lines of communication open w/other group
 - BOB – power providers (i.e. Blue Lake Power) should be a part of listserv to be informed about what people are doing in the area.
- ❖ Woody Biomass to Energy Workshop
 - Humboldt County FSC representation- **Lucy Salazar and Cybelle Immitt** participated in this workshop.
 - The workshop was put on by University of California Cooperative Extension Office and covered woody biomass to energy basics, currently applied technology, and emerging technology. There was a field trip to see the

biomass thermal facility at Almqvist Lumber, the Blue Lake biomass power plant, and the biomass gasification experimental unit at the Schatz Energy Lab. See attached summary of the event.

- o The updated Humboldt County fire plan will include a section on biomass utilization. Review technology and map facilities in Humboldt County and chart their specification.
- ❖ Whitethorn Biomass brainstorming:
 - o Gareth Mayhead from the University of California Berkeley met with a small group of folks at Whitethorn Construction to brainstorm what type of biomass facility might make sense for that area. Much was discussed but Gareth recommended starting small and putting in a heat generating unit that would use the wood waste generated on site through regular milling and lumber product refinement. See attached notes.

Action Items:

- **Lucy** - Keep tabs on progress with biomass utilization and report back at next meeting. Need to focus on goals for Humboldt County. **On-Going**
- **Lucy** - keep tabs on the Western Forestry Leadership Coalition – woody biomass utilization. **On-Going**
- **Cybelle** – Keep an eye out for grant opportunities to fund Fuel management and biomass utilization. **On-Going**
- **ALL** - Provide support to staff as the fuels plan portion of the MFPP is updated and incorporated into the rest of the fire plan update process. **On-Going**
- **ALL** - Provide support to staff to draft a woody biomass utilization section for the updated Humboldt County fire plan. **On-Going**
- **Cybelle and Lucy** - Forward the edits suggested by the Humboldt County Fire Safe Council to the Redwood Futures group on their evolving notes and keep in touch with their activities related to this topic.

2. DEVELOP A RELIABLE REVENUE SOURCE FOR FIRE PROTECTION

(Dave White, John McFarland, Will Harling and Cybelle Immitt. Coordinator – Dave White)

Discussion: Bridgeville now wants to form a district. Honeydew – wants district formation information.

Ian Sigman: Non-profit in Honeydew – no district boundaries; annexed by Petrolia? Benefit assessment? Informal poll done through newsletter – intro to what a benefit assessment could look like. Similar to Arcata's, but much smaller – unimproved parcels (ranchlands) and improved w/a residence or complex commercial – Honeydew Community Store, cabins or anything larger than a standard residence. Newsletter goes to 400+ people in area. Firefighters seem for it, but don't want additional responsibilities. Board members 'cool'. Benefit assessment is only for property owners, not for voters. The newsletter is based on Assessor's Address list – may not be inclusive. Majority of landowners own one parcel that is large in size. Many parcels are improved w/greenhouses and are growing large amounts of weed w/someone living on the property during the summer months.

Do not want to be connected information going to Assessor. Refer to Steve? w/Crescent Fire to gather information

Non-residential parcel - \$4/unit

Residential - \$20/unit
Commercial - \$40/unit benefit

Only 27 ballots were returned- 45% yes- 55% no
10 ballots were photocopied 'no' – passed on to friends?

More attractive to get on w/Petrolia to get tax benefits from property taxes – not happening at this point

Cybelles and John Miller – Have continued their work with interested departments to form or expand districts. They met in March with LAFCO staff and made a game plan to submit a reorganization plan at the July LAFCO meeting. They also plan to attend training provided by LAFCO that will focus on fire district issues.

Action Items:

- **Cybelles and John Miller** –Attend LAFCO training
- **Cybelles and John Miller** – Continue to work with the following:
 - Palo Verde – have they done their survey yet? Have identified a tentative district boundary. In the process of taking next steps.
 - Garberville – Identified expansion area. In the process of taking next steps.
 - Briceland, Telegraph Ridge and Whitethorn – Have identified their proposed district formation/expansion boundaries. Are in the process of taking next steps
 - Bridgeville Fire – Forming a new district.
- **Cybelles** - Look into getting some HSU intern help with community surveys
- **Cybelles and John** - Work closely with LAFCO staff and the participating fire departments to get the reorganization application to the LAFCO Commission for their July meeting.

3. LEVEL OF SERVICE STANDARD

(Dave White, John McFarland, Bob Harris, Hugh Scanlon & Cybelles Immitt. Coordinator – Cybelles Immitt)

Discussion: Hugh is not here today – Cybelles standing in for him. March 31, 2010 meeting. Hugh is building WebGIS tool – click on parcel, find out what volunteer department and details regarding level of service.

Hugh has put together a breakout of how the LOS tool might look. He used the 2009 annual report sponsored by CAL FIRE, level of service survey, and other sources of information as resources to build the tool.

The Committee met on March 31 and discussed what was needed to bring this over the finish line. Made plans to bring a version of it to a Fire Chiefs' Association mtg. and to get a beta test of it set up on the Humboldt County Web GIS.

What are ideal standards for LOS? 1720 standards – good starting place for setting goals – if ultimately we could get there it would be great. The information could be used for grant applications

Action Items:

All – Assist staff to incorporate the LOS data tracked by this group into the updated County Fire Plan.

Immediate next steps: Complete sample area demonstrating how the tool can be used to illustrate the current level of service, present to HCFCA and proceed according to feedback received.

- **Hugh and Cybelle** - Finish entering all of the known information into the data charts – use the 2009 annual report as a data source to update what we have.
- **Hugh** - Get additional information from Arcata Fire Captain Kurt Watkins and Dave White.
- **Cybelle** – Work with **Jerry** at Community Development Services to get the application set up on the County's Web GIS. Try to get this done before May 26 so we can guide the chiefs through the mapping program at their meeting.
- **Hugh** - Present sample and underlying list of criteria to the chiefs. Tentatively set for May 26 in Eureka. In preparation for the meeting email the Web GIS link to the Chiefs with instructions about how to use it so they can review the tool and come prepared with questions and feedback.
 - ✓ Will be looking for help from the chiefs to self classify LOS. Each fire department will have to approve base information with some quality control oversight. Each fire department will do a self analysis that is then cleared by the chiefs.
- Could add this as an item to the Realtor's disclosure document. Wait on this task until we have a more complete draft product to share. **Cybelle** - Check on the disclosure product being prepared by the realtors and make sure they are including fire service.

Long-term Plan – Work with the HCFCA to Identify and agree on a level of service standard that can be used as a goal by fire departments.

- **ALL** - Start thinking about what "adequate level of service" might mean. Start with the NFPA 1720 standard.

4. IMPROVE EMERGENCY DISPATCH SERVICES

(Dan Larkin, Hugh Scanlon and Dave White. **Coordinator – Dave White**)

Report: Where do we want to go w/communication systems? Many problems – need to improve what we currently have. 2) Coverage study of existing services looking for underserved or unserved communities – Fieldbrook is underserved. Orick is unserved. Narrow banding – digital communication – must be converted by later this year. Pagers not compatible w/narrow band. Digital change over probably will not happen in near future. Seeking grant to repair and replace communications system. Talking between agencies is happening to coordinate communications.

Dan Larkin: Significant opportunities coming up in the next couple of years – stimulus funding may be coming to Humboldt to build communications. CALSEEK – northern planning area divided into 3 subsections. Humboldt County is lead for west coast subsection. Linkage via microwave. Additionally, significant other State and Fed funding streams to re-build parts of system.

- **Find and repair problems in the current 3 repeater system.** Mt Pierce and Horse Mtn. have both been providing substandard operation as compared to the past. Both of these repeaters were installed improperly and have been in the shop to be repaired. By reinstalling them correctly the transmit power has been increased. Additionally the radio techs have identified some antenna location issues on both sites. Permission

has to be obtained from the State Telecom people to change the antenna locations. This is in the works.

- **Conduct a countywide communications study** to determine the coverage of the current system and what additional repeater locations would improve service to current users and start providing service to un-served areas (North county).
- **Investigate changing the license holder from the State to the County** as well as move the repeaters to county vaults. The reason for this is that any changes in the license or the repeater setup must be approved by the State Telcom people in Sacramento. This can take months and in one case an additional repeater on the license was denied.
- The HCFA association is working on an Assistance to Firefighters grant package to replace the entire fire radio system in Humboldt County. This would include adding new repeater locations to provide countywide coverage, replacing current repeaters, base, and mobile radios as well as provide a portable radio for every firefighter riding position on every fire apparatus in the county.

Action Items:

- Keep the FSC abreast of goings on in the effort to coordinate with other agencies. **(Dan Larkin and Dave White) – Ongoing**
- **All – Assist staff to incorporate appropriate emergency dispatch and communication information into the updated County Fire Plan.**

5. MFPP POLICY RECOMMENDATION INTEGRATION INTO THE GPU

(John McFarland, Tim Jones and Cybelle Immitt. Coordinator – Cybelle Immitt)

The Planning Commission is still in the process of reviewing the Land Use Element.

Action Items:

- **Cybelle** - keep the Council posted about progress toward the Safety Element.
- **All** – Assist staff to incorporate relevant information from the GPU into the updated County Fire Plan.
- FSC members send policy level comments addressed to the Planning Commission. A good way to do that is to submit a comment using the website tool (www.planupdate.org).
- Editorial corrections or errors can be sent to **Cybelle**. cimmitt@co.humboldt.ca.us
- **Cybelle** - Send link to Alternatives A and C when developed.

AGENDA ITEM 7 – FIRE SEASON INCIDENT REPORT AND HUMBOLDT COUNTY FIRE CHIEFS ASSOCIATION REPORT

Discussion: John McFarland: Annual Report given to BOS – published for 2009. See attached email from John sent 04/12/2010 for details – he read this during meeting.

CR – offering A.S. in firefighting; ROP approved curriculum for volunteer fire fighters

Action: NO ACTION ITEMS HERE.

AGENDA ITEM 8 –REPORTS FROM LOCAL FSC

Discussion

Lower Mattole:

- ❖ Josh & others worked hard on grant proposal for Prosper Ridge – Clearinghouse Grant – help community be FireSafe and restoration of meadows to keep ridge top open. Additionally, native grass restoration. Getting more organized over the past few years as the loss of former leader was difficult. Title III grant applied for to update Fire Plan was funded.

Southern Humboldt (<http://www.newforestry.org/shfsc/>):

- ❖ 2010 Clearinghouse Grant – Kings Range – Fuels Reduction/Fuel Break project. Currently working on environmental compliance portion.
- ❖ Title III County Grant to finish up fire plan was funded

Van Duzen Watershed:

- ❖ Working on 2010 Fuel Break Grant through USDA
- ❖ County Title III Grant to become Bridgeville FireWise and to finish CWPP funded.
- ❖ Starting an agreement w/USFS to provide the local crews to do the work.

Willow Creek (<http://willowcreekfsc.org/index.html>):

- ❖ FireSafe Day in Willow Creek coming up on May 15 from 10 am – 3 pm. Set up a booth or table.
- ❖ Title III grants funded – 1 for FireSafe Day and other for a Living with Fire in the Lower Trinity brochure.
- ❖ \$350 grant from HAF to cover costs of poster contest
- ❖ Fish Derby – 3rd annual event – become popular – public relations event
- ❖ 5 different chipping days so far this year – more to come
- ❖ Working on CWPP – hired community liaison to complete – FSC in both Trinity and Humboldt Counties. Hope to have CWPP completed by the end of June.

Orleans/Somes Bar FSC (<http://www.mkwc.org/programs/firefuels/index.html>):

- ❖ Received Stimulus funds for fuels reduction work - \$82,000 administered by the USDA Forest Service. 120 acres of prescribed burning 2010 – 2011.
- ❖ 50/50 grant was disqualified as one letter had missing information (CAL FSC) – Board meeting to discuss disqualified projects.
- ❖ Build support for prescribed burning (grant applied for)
- ❖ Final draft of *Lifestyles of Rural and FireSafe* – look for it on YouTube under 'Orlean/Somes Bar FireSafe Council'; Email Will for a copy.
- ❖ Upcoming Northwest Prescribed Fire Burning Conference – coming up in Redding

AGENDA ITEM 9 – GRANT REPORTS

Discussion -

- **2011 Clearing House Grant Proposal:**
 - Proposal was submitted to expand the fuels reduction cost-share program. Should find out if we were selected by June 14, 2010.
- **2010 USFS grant Project – Fuels Reduction Cost Share Program**
 - Still waiting on the Environmental compliance clearance

- FSC Staff, MRC Staff, CAL FIRE Staff and UC Forestry Extension Staff continue to work together to put together materials for the program based on what the MRC already had.
- **Cybelle** working on contracts with local FSCs so when the funds come in the County will be able to get them started on implementing the program.
- **2009 USFS Grant - Humboldt County CWPP Update and Countywide Fuels Reduction Coordination Program:**
 - A summary document needs to be drafted and the GIS tool needs to be posted live by the end of June.
- **Other grants and Funding Sources:**
 - Title 3:
 - ✓ Seven grant applications from 5 Fire Safe Councils submitted to the Humboldt County Title III Small Grant Program by the March 8 deadline. Staff reviewed the applications using the Humboldt County Fire Safe Council Ranking Criteria and found them all to be fundable. Staff recommendations were prepared and submitted to the Humboldt County Board of Supervisors (BOS) for approval at their April 6, 2010 meeting. The applications were all approved for funding by the Board of Supervisors. Cybelle is working with County Council and Risk Management to get contracts signed so that the Fire Safe Councils can start to get their first installments of funding.

AGENDA ITEM 10 SPECIAL GUEST: MEGHAN RYAN, PLANNER I, COUNTY OF HUMBOLDT

Discussion: The following is a brief synopsis of the Building and Planning Division's permit referral process.

BUILDING DIVISION: When a building permit is applied for, the Building Division sends referrals for the proposed project. If the project is ministerial (i.e. meets all zoning and other legal requirements), the referral agencies are sent the information, but the referral for these types of permits is more of an informational note for the agency, but does not require a response from the agency. The Building Division will accept comments for commercial projects, not residential projects that are ministerial. **If your agency (Fire Department) would like to be notified of new applications for building permits in your jurisdiction, you must, in writing, request the information be sent you.** In your letter to the Building Division, please include a name, address and phone number of how the agency can be contacted. Without providing, in writing, the request to receive project notification, the Building Division will not automatically send the information to you.

For more information regarding the building referral process, please contact Delillah Moxon, at (707) 268-3746 or dmoxon@co.humboldt.ca.us.

PLANNING DIVISION: When a project is opened at the Planning Division, a status sheet (handout at meeting) is completed and the referral agencies are marked. Thanks to Cybelle and the hardwork for the FireSafe Councils, we now have a complete database of both Fire Protection Districts (FPDs) and Volunteer Fire Departments (VFDs). When a Planner is getting ready to refer a project, we use a GIS tool that helps identify the agencies the project should be referred to, including FPDs and VFDs. This referral is automatic and you do not need to make the request in writing.

Once the referral goes out, the agencies have approximately fifteen (15) calendar days to provide any comments to a proposed project. The Planning Division will accept comments after the 15 days, but depending on how much time goes by, the project could already be approved, so it's important to be mindful of the due dates for comments.

The Planner must adhere to Fire Safe Regulations and the Humboldt County Code when evaluating proposed development projects. These regulations are considered and do not need to be a part of a FPD or VFD comments. The FPD or VFD should provide comments regarding information specific to their area, which may not be covered by the other regulations.

For example, at today's meeting, a copy of a letter from the Westhaven VFD was shared with the group. This letter was written to include the standard comments the Westhaven VFD would like for their area. By completing a template response, the comments from the Westhaven VFD are added to every project in their jurisdiction automatically. In this situation, the Westhaven VFD does not need to answer every referral they receive, but they can be reassured their concerns are being addressed through their standard response and have a 'heads up' about development in their jurisdiction.

For more information regarding the planning process, referrals or response to comments, please contact Meghan Ryan, Planner I, at (707) 268-3798 or mryan@co.humboldt.ca.us.

Action: Todd to come back and discuss building issues in urban wildland interface and illegal structures.

AGENDA ITEM 11 CONFIRM NEXT MEETING DATE AND ADJOURN

The next meeting date will be **July 12, 2010 from 1:00 to 4:00 PM at the Six Rivers National Forest Headquarters office**

Bob Harris adjourned the meeting at 4:30

FIRE-FUELS REDUCTION and BIOMASS UTILIZATION
Evolving Wisdom

[Provided by the Redwood Futures team at the March 13, 2010 Redway workshop]

Actionable ideas from other meetings:

1. Identify the anticipated volume of biomass potentially available in a given area to establish the level of potential feedstock.
 - a. Note: The Six Rives NF is looking into acquiring LIDAR data, which can be used to determine potential biomass amounts, but this is a very expensive undertaking ~\$1/acre. We are open to any funding ideas, and are starting to beat the bushes for other cooperators. Any ideas are welcome.
2. Create-Develop a biomass utilization public education program to gain support for planning and utilization-implementation.
 - a. Note: There are already similar programs available elsewhere where biomass utilization has become a standard – Idaho, Montana, Oregon. Those could be used as a template.
3. Develop and conduct a variety of field trips to observe biomass utilization projects.
4. Organize a regional conferences on biomass utilization options. Continue with the University of California Cooperative Extension model (<http://groups.ucanr.org/WoodyBiomass/index.cfm>). Dovetail with previously conducted biomass utilization workshops that have taken place locally.

Wisdom from other meetings:

- Biomass projects need to be appropriately 'scaled' to location.
- Forest health, soil health, habitat etc must all be considered.
- Capacity for energy transmission outside the region will need to be increased before we can sell transmit outside the region
 - o Note: The practice of selling energy credits outside the region is currently possible but transmitting the energy will likely be more complex – example: Blue Lake Power currently sells renewable energy credits to a San Diego municipal energy utility but the energy is used locally.
- Bio-energy needs to be socially acceptable (i.e. public resistance to power lines through sensitive areas could limit rural energy generation)
- The Public, tribes, private timber companies, agencies, and businesses need to proactively cooperate to achieve a landscape level approach to the issue of biomass utilization for hazardous fuels reduction. –Success stories are located at the following web site: http://www.forestsandrangelands.gov/Woody_Biomass/success/index.shtml.

Redwood Futures – Redway Meeting
Action Team: Fire-Fuels Reduction Biomass Utilization
March 13, 2010

Strategy:

- o Small Scale
- o This principle should be at the top of the list - Forest health, Soil health, habitat must be considered (Don't rake it clean)
- e Utilize wood from fuel breaks on private and public land. Private land owners and Public.
- o Use local. To varying degrees, depending funding and capacity. Fire Safe Councils as the vehicle for can play a role in facilitating. putting together the development of hazardous fuels reduction packages for landowners that combine grants, the sale of products (by-products), private investment on the part of the landowner, and regulatory guidance.

Action Steps:

- o Attend the Woody Biomass to Energy Workshop on March 25, 2010.
- o Meet at Whitethorn Construction with Gareth Mayhead to discuss the possibility of setting up some kind of pilot project - biomass utilization facility.
- o Train people - develop the skill-set necessary to accomplish this. Bring together the different skills that are necessary for putting together the above hazardous fuels reduction packages.

Contacts:

- o Cybelle Immitt – Humboldt County Fire Safe Council/County of Humboldt
- o Bill Eastwood - Southern Humboldt Fire Safe Council

Biomass Energy Workshop a Success!

Author: Gareth Mayhead
Thursday April 1 2010

Sixty five people attended our Woody Biomass to Energy Workshop that was held in Eureka last Thursday [March 25, 2010]. We have posted the presentations [here](http://groups.ucanr.org/WoodyBiomass/Woody_Biomass_to_Energy_Workshop_2/Agenda_and_Presentations.htm) [[http://groups.ucanr.org/WoodyBiomass/Woody Biomass to Energy Workshop 2/Agenda_and_Presentations.htm](http://groups.ucanr.org/WoodyBiomass/Woody_Biomass_to_Energy_Workshop_2/Agenda_and_Presentations.htm)].

The aim of the workshop was to help attendees to understand the basics of different conversion technologies including scale, cost, raw material specification and whether they are proven or emerging technologies. We started by looking at some of the basics regarding biomass feedstock sources, the potential use of this material as an energy source, competing uses for the material and an introduction to conversion pathways. It can make sense to convert biomass to energy but there are many other uses out there that may add more value.

Next we looked at proven technologies including heat applications, electricity and cogeneration (or combined heat and power). The use of woody biomass for heat is a proven technology at scales ranging from a single stove to systems providing heat to larger buildings. These "institutional" systems can make financial sense if oil, propane or electricity is replaced by biomass as a fuel (generally chip or pellets). The technology used is well proven in Europe and elsewhere in the States. It is an extremely efficient way to capture the energy in wood – some systems are 90% efficient. Generally systems may make sense in buildings that have a floor area over 10,000ft² that use a reasonable amount of heat. It is relatively easy to identify simple payback period if you assume the replacement of an existing heat system.

Electricity generation is also a proven technology and California has approximately 30 existing biomass power plants. Typical power plants are around 20 MW in size and consume up to 200,000 bone dry tons of fuel per year. Smaller scale (down to 5 MW) facilities generally cost more per kW to build and operate. The use of biomass in a stand alone power plant is about 25% efficient because much of the heat energy is wasted in the process. If the heat is captured and used (for example to heat dry kilns) the efficiency increases to around 70%.

We then investigated emerging technologies including gasification, pyrolysis and the production of liquid fuels. Both gasification and pyrolysis have been around for decades (and longer) but for the most part they are still emerging technologies due to costs, reliability and lack of markets for the products produced. Gasification of biomass has the potential to produce electricity on a small scale and there are a number of demonstration projects in California. Currently the cost of producing this electricity is expensive and would only be applicable to off-grid areas. Various forms of pyrolysis are used to produce solids (char), liquid (bio-oil) and gas. Pyrolysis can be an energy intensive process and may have future potential to produce chemical feedstocks from wood.

The final presentation on technologies identified the three biomass to liquid fuels pathways. It then focused on starch conversion, cellulosic conversion, traditional biodiesel and synthetic diesel production. Most technologies are still emerging and the costs are challenging at present.

We wrapped up the morning session with an update on the Biomass Crop Assistance Program (BCAP) which is currently on hold. A comment period on the proposed new rule for the program is open until April 9 2010. We also discussed some of the unintended consequences that the program has created since it began in August 2009.

In summary heat and electricity production are proven technologies that can make sense. If you are looking for a relatively small community-scaled operation then heat can be cheaper than fossil fuel alternatives. Electricity generally makes economic sense at a larger scale. All of the emerging technologies will develop further and are likely to play some part in future energy product production. However, we warned that if a story about a technology sounds too good to be true then it generally is. For anyone interested in woody biomass to energy projects undertaking due diligence and asking the right questions is vital.

After lunch at the Samoa Cookhouse we embarked on a very wet field tour to three locations to look at a simple heat installation, a power plant and a demonstration gasifier.

**Whitethorn Construction Woody Biomass Utilization Brainstorming Session
March 27, 2010**

Gareth Mayhead from the University of California Berkeley met with a small group of folks at Whitethorn Construction to brainstorm what type of biomass facility might make sense for that area. Much was discussed but Gareth recommended starting small and putting in a heat generating unit that would use the wood waste generated on site through regular milling and lumber product refinement. This would look something like what Almqvist Lumber uses but more modernized, efficient, and clean (also more expensive to buy). A radiant heat system is already in place fueled by propane. The idea would be to replace the propane with a wood powered system and have the propane as a back-up. Need to:

- ❖ Pin down how much wood waste is generated on site;
- ❖ Identify how much biomass would be needed to replace the current propane use;
- ❖ Identify other possible sources of biomass if the on-site waste is not sufficient;
- ❖ If this system can be proven then look into possibly providing biomass to heat other facilities like the local hospital and schools (start finding out how they are currently heated and when they plan to update their systems – start to educate them about the potential for wood heat); and
- ❖ Keep tabs on evolving technology that would make it feasible to put in a co-generation plant that would produce both heat and electricity and be at a scale that made sense for the community (operated on the amount of biomass that could realistically be expected in the area and a facility that would be an acceptable size for the members of the community).

Another possibility to be explored is producing landscaping materials on the Whitethorn Construction site using waste from fuels reduction and timber harvest (Also keep an eye out for other possible uses of this type of woody biomass). Need to:

- ❖ Evaluate examples from other places like Wes Green in Arcata (<http://www.wesgreenlandscapematerials.com/>) or McKnight Logging and Construction in Willow Creek.
- ❖ Explore local supply and market potential
- ❖ Evaluate export cost and return...
- ❖ Look into biomass utilization grants – this might attract those grants because it creates an incentive to get the material off the ground and reduces the need to pile burn which is getting harder to do.
- ❖ Check out the newly released guide for developing a woody biomass collection yard:
http://www.forestsandrangelands.gov/Woody_Biomass/documents/feedstock_yard_guide.pdf
- ❖ **Yana Valachovic of UC Cooperative Extension pointed out the following:**
 - Regarding Green Waste at Whitethorn Construction. Keep in mind the interaction with Sudden Oak Death and the potential to become a facility that is highly contaminated with the disease. It is possible to compost infected materials completely, but this has to be done to a very high standard and would not be possible for some of the bark products

More details complements of Seth Zuckerman of the Mattole Resonation Council (Very slightly abbreviated by Cybelle):

1. A wood-fired cogen system of the scale to match Whitethorn Construction's operation is a little beyond the frontiers of currently available, off-the-shelf technology. I had imagined that what would make a biomass installation cost-effective would be the combination of offsetting your propane and electric costs -- or even selling power back into the grid. With just \$10K/year of propane costs to offset, it seems like a difficult proposition to make it worthwhile.

2. It would take a large volume of raw material just to cover your own heating needs -- as a ballpark estimate, it would take 200 to 250 cords per year of material (equivalent to 450 to 550 tons per year) to displace the \$10,000 worth of propane. As a result it is crucial to have a secure, steady source of raw materials. If you have to pay for that, the economics go south in a hurry, given that you are trying to replace propane that is trouble-free, and requires no management effort on your part. Overall, the value of wood for energy production is lower than its value for almost anything else, even seasoned firewood for home use.

3. The key, then, seems to be to be processing enough material for higher-value uses so that you are generating enough off-cuts, chips, sawdust (which can be mixed into the stream of what is burned, but can't comprise too large a portion of it) to feed your boilers without having to pay for raw material.

4. One possibility Gareth mentioned would be to produce poles for agricultural use, which could be sent to Ukiah for treatment for rot resistance. Having a market for a product that could be made from small-diameter wood would be a keystone of this operation, because it would generate the woodwaste that would feed the boilers as a by-product.

5. Gareth emphasized the importance of developing the supply chain for a heat-only installation that is relatively cheap to capitalize, so that you can have confidence in it, before making a larger investment in a more elaborate system such as a co-generator.

6. I was further discouraged when I heard how much of a hassle it was for you to sell firewood from your yard. I hadn't thought about that as a deterrent, but I can see how it would be.

7. Gareth's overall recommendation: Start with a project to heat Whitethorn Construction kilns and warehouse, followed by schools and the Garberville hospital. "Don't be too clever". This will prove the concept to the local community and overcome resistance that might arise if a bigger project were the first to be proposed. A key question to ask in doing the ballpark calculation is how many tons per month the operation generates, and how much it would cost to process it into a size that can be used by the boiler in question.

8. Gasifier and pyrolysis technologies are at the research and development stage, not yet at the stage where you can buy them commercially. You would need to budget the money to hire a PhD to operate it.

Finally, some tidbits that I gleaned:

- Wood pellets are made with the same technology as agricultural feed pellets, just different dies and rollers. The local pellet manufacturer starting up in Carlotta intends to produce 2000 tons per year, which is their sense of the local market. Tanoak alone doesn't cohere well as a pellet, but needs to be combined with other woods. Pellets currently sell for about \$205 per ton. The economics of the Carlotta plant depend on the owners having acquired the machinery quite cheaply. A mid-scale pellet mill would cost about \$5 million new.

- A 25-kilowatt generator would cost at minimum \$250,000. A grid interconnection would add \$90,000 to that. Solar and wind get more favorable treatment. For now, PG&E pays a relatively low rate per kW-hr. However, a "feed-in tariff" specifying a more favorable rate for biomass and other renewables would help improve the economics, and might help the utilities meet their renewable portfolio standard.

Subject: COUNTY BOARD OF SUPERVISORS
Location: COURT HOUSE

Start: Tue 4/6/2010 9:00 AM
End: Tue 4/6/2010 12:00 PM

Recurrence: (none)
PRESENT ANNUAL REPORT WITH MIKE HOWE

TIMED EVENT - 30 MINUTES STARTING AT 10:30 A.M.

GOOD MORNING BOARD AND STAFF - I'M JOHN MCFARLAND

I'M HERE TODAY REPRESENTING HUMBOLDT COUNTY FIRE CHIEFS

LAST YEAR WE IMPLEMENTED OUR FIRST COUNTYWIDE ANNUAL REPORT...

CAL FIRE UNIT CHIEF RALPH MINNICH AND REDWAY CHIEF BRYAN ANDERSON
CREATED THAT FIRST ANNUAL REPORT

TODAY I AM HERE WITH CAL FIRE UNIT CHIEF MIKE HOWE TO MAKE OUR SECOND
ANNUAL REPORT

FIRST, I WOULD LIKE TO INTRODUCE YOU TO OUR ASSOCIATION OFFICERS...

HUMBOLDT DISTRICT NO. 1 CHIEF KEN WOODS IS SECRETARY OF OUR ORGANIZATION,
AND

BLUE LAKE CHIEF RAY STONEBARGER CHAIRS THE COMMUNICATIONS COMMITTEE,
AND

ARCATA'S RETIRED CHIEF DAVE WHITE IS THE TREASURER

FORTUNA CHIEF LON WINBURN, WHO COULD NOT JOIN US TODAY, IS THE VICE
PRESIDENT

SEVERAL OF THE OTHER CHIEFS ARE ALSO HERE TODAY -
I WOULD LIKE TO ACKNOWLEDGE THEIR PRESENCE AND SUPPORT

AS YOU KNOW, HUMBOLDT COUNTY HAS 42 FIRE AGENCIES - NOT STATIONS...
AGENCIES - THAT'S A LOT!

THOSE AGENCIES RANGE FROM THE CAREER DEPARTMENTS SURROUNDING THE BAY,

WITH 30 TO 50 MEMBERS EACH AND BETWEEN 2,000 AND 3,000 INCIDENTS PER YEAR -
EACH

TO THE TINY VOLUNTEER COMPANIES OF THE COUNTY - LITERALLY IN THE MIDDLE OF
NOWHERE...

SOME WITH AS FEW AS WITH FIVE OR SIX MEMBERS EACH AND BETWEEN 5 AND 10
INCIDENTS PER YEAR

WE LOVINGLY CALL THEM THE 'BAKE SALE DEPARTMENTS' AS A BAKE SALE MAY BE THEIR MAJOR SOURCE OF REVENUE

AND, OF COURSE EVERYTHING IN BETWEEN

OUT OF THOSE 42 AGENCIES THERE ARE ONLY 5 WITH FULL TIME FIRE CHIEFS...

FORTUNA HAS NOW JOINED THAT GROUP WITH THE FULL TIME APPOINTMENT OF THEIR FIRE CHIEF

REGARDLESS, WE ALL HAVE THE SAME MISSION - SAVING LIVES AND PROTECTING PROPERTY

THE TASK IS NO DIFFERENT NO MATTER WHERE WE LIVE

AND, WE ALL HAVE THE SAME REQUIREMENTS - THE SAME REQUIREMENTS AS ANY BIG CITY METRO DEPARTMENT...

SACRAMENTO, SAN JOSE, LOS ANGELES - PAID OR VOLUNTEER - WE ALL DO THE SAME EXACT JOB

YOU WILL NOTE THAT THIS REPORT BUILDS UPON THE FIRST REPORT

THE DEPARTMENTS EACH SUBMITTED THEIR COVER PAGE AND A SHORT STORY AND WE BUILT THE STATISTICS

WE ALREADY HAVE PLANS FOR REPORT #3 - NEXT YEAR IT WILL BE EVEN BETTER YET

I WANT TO TELL YOU A LITTLE ABOUT THE FIRE CHIEF'S ASSOCIATION...

WE ARE A DYNAMIC GROUP OF DEDICATED INDIVIDUALS

SOME OF OUR OUR ACCOMPLISHMENTS THIS YEAR INCLUDE THE FOLLOWING:

A FIRE TECHNOLOGY PROGRAM HAS BEEN RE-ESTABLISHED AT COLLEGE OF THE REDWOODS...

IT WILL OFFER AN 'A.S.' DEGREE, OFFICER CERTIFICATION CLASSES, AND THE BASIC 'FIREFIGHTER 1' CURRICULUM

THE 'H.R.O.P.' PROGRAM HAS ADDED AN ACCREDITED 'VOLUNTEER FIREFIGHTER ACADEMY'

RECRUITMENTS ARE NOW TIMED TO INCLUDE THE ACADEMY DURING A VOLUNTEERS FIRST YEAR OF SERVICE

THIS FIRST YEAR SAW TWO ACADEMYS - AT ARCATA AND FORTUNA PRODUCE 50 NEW FIREFIGHTERS FOR HUMBOLDT COUNTY

WE ARE JOINTLY SEEKING REGIONAL GRANT FEDERAL GRANT FUNDING FOR UPGRADE AND REHAB OF THE FIRE RADIO NETWORK - TO THE TUNE OF OVER TWO MILLION DOLLARS

AND, WE ARE SEEKING A MOBILE BREATHING AIR COMPRESSOR FROM HOMELAND SECURITY FOR THE ENTIRE COUNTY TO USE

THE INDIVIDUAL DEPARTMENTS ARE ACTIVELY SEEKING GRANT FUNDING

WE COMPLETED A LONG NEEDED REORGANIZATION OF THE COUNTY FIRE DISPATCH CO-OP

THE FOUR DIGIT COUNTY WIDE NUMBERING SYSTEM WAS COMPLETED THIS YEAR (REFERENCE THE REPORT COVER)

WE HAVE INITIATED AN ALARM MATRIX FOR RESPONDING TO MAJOR INCIDENTS WHILE MAINTAINING COVERAGE OF THE REMAINING AREAS

COOPERATION WITH THE AMBULANCE PROVIDERS HAS IMPROVED SERVICE THROUGH COMMUNICATIONS TECHNOLOGY

DISPATCHING NOW MERGES THE FIRE RESPONSE WITH THE AMBULANCES AND ARCATA AIRPORT CRASH CREWS

THE RESULT IS FAR BETTER SERVICE DELIVERED MUCH MORE EFFICIENTLY

THIS YEAR OUR REGIONAL NETWORKING PROGRAMS WITH THE CHIEF'S ASSOCIATION HAVE EXPANDED

FROM DEL NORTE COUNTY TO NOW INCLUDE MENDOCINO AND TRINITY COUNTIES

AND, LAST BUT NOT LEAST - WE ARE JOINTLY CREATING A REGIONAL URBAN SEARCH AND RESCUE (USAR) TYPE 2 TEAM

AS FOR THE CHALLENGES...

WE CONTINUE TO STRUGGLE WITH PROVIDING ADEQUATE FIRE PROTECTION TO THE SAMOA PENINSULA

WE ARE WORKING WITH COUNTY STAFF TO MAINTAIN COMP INSURANCES FOR THE VOLUNTEERS

AND, WE ARE WORKING WITH LAFCO TO BRING THE MANY 'NO MANS LAND' AREAS INTO A PROTECTION ZONE

(REFER TO GARDEN LANE FIRE PHOTO)

CHIMNEY FIRE, FULL RESPONSE, MUTUAL AID, STRUCTURE LOST
SIMULTANEOUS SIGNIFICANT COMMERCIAL FIRE IN BLUE LAKE

WE ARE ALSO WORKING WITH LAFCO TO CREATE 'SPECIAL' DISTRICTS TO REPLACE 'BAKE SALE' DISTRICTS

SOME ARE CONSIDERING MERGERS WITH THEIR RESPONSE PARTNERS

ANOTHER MAJOR TASK HAS BEEN TRYING TO KEEP THE REGIONAL HAZ-MAT TEAM VIABLE

STILL - OUR GREATEST CHALLENGE REMAINS THE FINANCES - FOR ALL OF US...

SOME ARE FACING MAJOR BUDGET CRISIS WHILE OTHERS STRUGGLE DAY TO DAY

SOME OF THE DEPARTMENTS CAN NOT EVEN PROVIDE THE 5 OR 10 PERCENT REQUIRED GRANT MATCH

THERE IS NO REMEDY - THIS IS SAD - THEY CAN NEVER IMPROVE

AND A NEW CRISIS FOR EVERYONE IS WORKING THROUGH - THE NEW EMT REQUIREMENTS...

THE 'NATIONAL REGISTRY' REQUIREMENTS HAVE DIMINISHED MANY OF THE NEW EMT'S

TWO YEARS AGO OUR LOCAL EMS AUTHORITY REGISTERED OVER 1100 EMT'S IN THE REGION

THIS YEAR THAT NUMBER IS REDUCED TO ONLY 500 - A HUGE DECREASE NOW, NEW FEE INCREASES WILL LIKELY CAUSE THE DEMISE OF THE ENTIRE EMT PROGRAM

BETWEEN THE NEAR IMPOSSIBLE CLERICAL DEMANDS PLACED ON THE FIRE AGENCIES AND THE INCREASING FEES...

FROM ZERO FEES TO \$20 LAST YEAR, NOW TO \$40 THIS YEAR AND \$75 NEXT YEAR

FUTURE FEES WILL GO TO \$280 WITHIN THE FOLLOWING YEAR WE WILL PROBABLY SEE THE LAST FEW EMT'S DOWNGRADE TO 'FIRST RESPONDERS' - THAT'S A SHAME

MOST OF THE EMT'S IN THE COUNTY PAY THEIR OWN FEES - AS VOLUNTEERS THE SMALL DEPARTMENTS AND THE INDIVIDUALS HAVE BEEN REGULATED OUT OF BUSINESS

A SUMMARY OF OUR ACTIVITY STATS:

A TOTAL OF 12,786 EMERGENCY RESPONSES WERE MADE BY HUMBOLDT FIREFIGHTERS DURING 2009

85,000 PERSONNEL HOURS WERE DOCUMENTED ON THOSE INCIDENTS AN ADDITIONAL 53,000 HOURS WERE INVESTED IN FIREFIGHTER TRAINING OVER 12,000 HOURS WERE SPENT PERFORMING REQUIRED MAINTENANCE AND, OVER 10,000 HOURS INVESTED IN DEPARTMENTAL FUNDRAISING

THAT'S A TOTAL OF OVER 160,000 MAN HOURS EXPENDED BY OUR FIREFIGHTERS

I DESCRIBED THE GROUP EARLIER AS 'DYNAMIC' AND 'DEDICATED'...

I THINK THE STATS INDICATE THAT THE ENERGY EXPENDED BY THIS GROUP EXCEEDS BOTH OF THOSE DESCRIPTIONS

ENJOY READING THROUGH OUR REPORT - AND, STOP IN TO VISIT ANY STATION AT ANY TIME - YOU ARE ALWAYS WELCOME

OUR MEETINGS ARE ALWAYS ON THE FOURTH WEDNESDAY, IN THE EVENING, AND ROTATE AROUND THE COUNTY

YOU ARE INVITED TO ATTEND ANY MEETING AT ANY TIME YOU WISH

THANKS TO ALL OF YOU FOR YOUR CONTINUED SUPPORT - WE LOOK FORWARD TO WORKING WITH YOU THIS YEAR

THANKS!