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Testimony on: “*Logs in the Road: Eliminating Federal Red Tape and Excessive Litigation to Create Health Forests, Jobs and Abundant Water and Power Supplies*”

May 11, 2012

Hello, I am J.R. Ford and this is a great opportunity for me to speak to a joint oversight field hearing, thank you for the invitation. Today I am here representing a few organizations, as one often does in a rural community. These organizations are: Pagosa Cattle Company, Inc; Renewable Forest Energy, LLC and The Mixed-Conifer Working Group. It is from my involvement with these organizations that I am here today to offer my insight (which hopefully will help).

Pagosa Cattle Company, Inc: I have owned for over 21 years providing ranch management dealing with forest health, forest fuel reductions, river restoration, land restoration management, forest restoration and rangeland management. These management experiences have brought me to the task of starting up a company; Renewable Forest Energy, LLC which plans to build a 5Mwe gasification power plant run on woody biomass. The process for removal of biomass from the forest is at its prime. New European equipment options provide point of harvest mobile tree chipping at a fraction of traditional costs. However for both companies to be successful, securing a long term supply of material must be secured. Included with my written testimony is a presentation of the project(s) overview labeled as Exhibit A.

Below is an outline of some of the stepping stones these organizations have taken. I will begin with the project concept and progress to the hearing today.

- 2003 - 2009: The concept for forest thinning, locating the correct type of forest equipment as well as solidifying what would be done with the biomass removed. In our case the biomass will be used for a 5MWe gasification power plant.
- August 2009 – RFQ AG-82X9-S-09-0275 on Turkey Springs Biofuels Demonstration (TSBD) 288 acres. A test project was in order to determine if the forest health objectives were on track as well what are the cost estimates to perform the forest thinning. The designations and descriptions were met and the “pre-settlement” look could be achieved well within budgetary goals. The ground compaction studies were within the normal disturbance parameters.
 - October 2009 – TSBD awarded to Pagosa Cattle Company
 - Fall 2009 - Forestry equipment ordered from Sweden
 - June 2010 – Notice to Proceed on TSBD from Forest Service
 - November 2010 – Public Tour of TSBD
 - This test project, along with all of our contracts, has been open to the educational impact studies, students, professors and industry professionals. All have visited and collected data to test the impact of likewise projects.
 - August 2011 – TSBD complete – field data conclusive that project objectives could be met.
- June 2010 – Forestry equipment delivered – first Bruks mobile whole tree chipper in the U.S.A. from Sweden
- June 2010 – Private land contract on 1400 acres with the objective of forest health and biomass removal.
- September 2010 – Mixed-Conifer Working Group officially forms

- “This second meeting of the Mixed-Conifer Working Group focused on the purpose of the working group and an understanding of USFS planning and NEPA related to timber sales and fuels projects.” <http://ocs.fortlewis.edu/mixedconifer/meetings.htm>
- For over 21 months local citizens, environmental groups, government & tribal agencies and various other vested parties have been meeting to present a collaborative presentation for the future health of the San Juan forest. People from all across the state have met with this group. Their educational website can be found at: <http://ocs.fortlewis.edu/mixedconifer>. This group helped design a sustainable sized community project(s) focused on ponderosa pine and mixed-use conifer forests health.
- March 2011 – Our interest in a long term stewardship contract is expressed directly to the Forest Service based on the TSBD outcomes along with the collaborative Mixed-Used Conifer Working group.
- August 2011 – RFP on Pagosa Long Term Stewardship Contract AG-82X9-S-11-9002
 - The PLTS contract not only allows the original vision of taking biomass to energy but also will help reestablish the logging industry in Southwest Colorado where it has been dormant for many years.
 - November 2011 – Request for 60 day extension on all bid proposals for PLTS
 - January 2012 – Request for 60 day extension on all bid proposals for PLTS
 - March 2012 – extension deadline for PLTS
- September 2011-2012 Hired Mountain Studies Institute to research: pine beetle reduction through the wood chipping process; increase in ground water supply due to additional infiltration; increase in tree hydration due to reduced trees stems per acre.
- TODAY – a joint oversight field hearing entitled “*Logs in the Road: Eliminating Federal Red Tape and Excessive Litigation to Create Health Forests, Jobs and Abundant Water and Power Supplies*”

The other organization that I am here representing is The Mixed-Conifer Working Group of which I am a charter member. The mission statement for the working group as taken from their website <http://ocs.fortlewis.edu/mixedconifer> is: “The Upper San Juan Mixed Conifer Workgroup is committed to collaborative approaches to improving the health and long-term resilience of mixed-conifer forests and the communities located near them in southwest Colorado. The Workgroup will focus on strengthening understanding, sharing knowledge and lessons learned, developing management approaches, initiating high priority projects, and monitoring results using an adaptive framework.” The Mixed-Conifer Working Group resource documents are listed here with links to the webpage: [Working Definitions](#); [Study of forest fragmentation on the Pagosa District by McGarigal and Romme](#); [National Forest Foundation Grant for the Upper San Juan Mixed Conifer Working Group](#); [Historical Range of Variability and Current Landscape Condition Analysis: South Central Highlands Section, ; Southwestern Colorado & Northwestern New Mexico](#); [Mixed-Conifer Forests in Southwest Colorado: A Summary of Existing Knowledge and Considerations for Restoration and Management](#); [All Vegetation Map](#); [All Vegetation Map/w Roads](#) ; [2010 Forest Health Report -- Colorado State Forest Service](#); [Report from the October 2010 Mixed Conifer Workshop, report by the CFRI](#). The Mixed-Conifer Working Group is a volunteer group comprised of 25% environmentalists, 25% conservationists & local citizens; 25% industry professionals and 25% state and federal employees. Here are only a few of the participants; Colo. Div of Parks and Wildlife, Mountain Studies Institute, San Juan Citizens Alliance, Renewable Forest Energy, Colorado State Forest Service, Pagosa Ranger District (USFS) and the Archuleta Office of Emergency Mgmt. Exhibit C to this written testimony is a briefing paper regarding this work group.

Having the support of your community is a key factor for success with any project and the collaborative efforts of the organizations I represent here today are essential to public education on forest health in Southwest, Colorado. Gaining public support is important. All of these organizations enjoy the working relationships and are confident that the locals of the areas support the forest health interest. It is my recommendation that any intermountain west community that is interested in the health of their forest to create a similar working group.

After two years participating with The Mixed-Conifer Working Group and over 21 years experience managing large ranches; time has shown me that there is work to be done to get over the barriers that keep community sized forest health project streamlined and viable. The top nine obstacles with corresponding recommended solutions; as seen through my experiences with: the bidding process as contractor for Pagosa Cattle Company on USDA’s RFP (request for proposals) and the collaborative and educational processes of the Mixed-Conifer Working Group are listed below.

1. **GUARANTEE LONG TERM SUPPLY:** Aligning the biomass supply with a local electrical cooperative and a sound business plan for private sector investors. Investors return on investment for our project requires a 15 year minimum alignment.
 - The current law should be amended to allow for stewardship contract time parameters to increase the span to up to 25 years.
2. **PUBLIC SUPPORT:** There is a large need to educate the public as well as hold open meetings in order to gain the necessary support to understand and accept all that is needed to be performed in order to achieve a health forest. We describe the forest look as “pre-settlement” reducing the tree stems per acre in order to obtain many benefits.
 - From 21 months of meetings through The Mixed-Conifer Working Group which is made up of volunteer group comprised of 25% environmentalists, 25% conservationists & local citizens; 25% industry professionals and 25% State and Federal employees the public support has increased and become focused on a main goal of getting the forest healthy.
 - It is my recommendation that any intermountain west community that is interested in developing a sustainable solution to their forest health problems, create a similar working group.
3. **CANCELLATION CEILING / GOV. BONDING REQUIREMENTS:** This is a crucial step in order to protect the contractor however the current bonding requirements inflate costs to unappealing levels. To protect contractors investment.
 - Establish a universal stewardship contract cancellation ceiling fund at the Federal level to help alleviate the regional bonding burden.
 - Contractors can look to the USDA loan guarantee program. If their program had 100% guarantee on the government side of contract default.
4. **POL:** Total removal and utilization of all POL (products other than logs) within a Forest Service contract. Reduce fuels loading in order to protect WUI (Wildland Urban Interface).
 - Whole tree chipping at point of harvesting.
 - New gasification technology is available. Gasifying all woody biomass by chipping all POL for gasification in a power plant to produce electricity.

5. **IMPLEMENTATION:** It has been our experience that the Forest Service regularly shares information regarding the opportunities for grants to initiate studies, or education research tied to biomass utilization.
 - It has been our experience that the Forest Service has not set aside funds for actual implementation of biomass utilization contracts.
 - If the Forest Service has a heightened concern in the unknown biomass market then it would be my recommendations that smaller community scaled forest health projects are funded. This will create awareness and field data results to quantify future biomass contracts.

6. **HAUL DISTANCE:** The Forest Service does not appear to take into account the significance of the cost transportation of forest products, like biomass for product from source to plants. This is contrary to knowledge that hauling of conventional forest products, like sawtimber, is typically the most expensive aspect of converting standing trees to products.
 - Reduce the haul distance of forest products. It is our recommendation to limit the distance to approximately 50 miles or less from contract area.

7. **VALUATION OF FOREST PRODUCTS.** Currently, the Forest Service assumes trees in the small sawtimber range (beginning at 8” dbh up to 12” dbh) have substantial value in the market place. Current market conditions do not reflect this assumption.
 - We feel that the best economic way to restore local forests around WUI (Wildland Urban Interface) is for stewardship contracts to contain a price for the POL (products other than logs) removal service and the 12” dbh and larger should be sold as sawtimber by the ton at market rates.
 - Basically stating that 8-12” dbh material should be considered POL.

8. **BALANCE:** We have found that the Forest Service prefers to fund large scaled “landscaped” projects instead of community scaled forest health projects.
 - Finding a balance to both large and community scaled projects is our recommendation. Bigger landscaped projects do not always mean better value. Creating and implementing community scaled forest health contracts will help build sustainable communities and contract completion.

9. **TIME VALUE:** Amount of time and investment that a contractor spends working on a Forest Service stewardship contract all the while not knowing if the Forest Service has the capability to fund the project.
 - Secure and reserve funds for community scaled forest health projects.

In closing it is my intent to create a commercial viable business in which total forest product removal (sawtimber and POL) is achieved, leaving no residual fuels on the forest floor – as currently too much biomass (all) is left on the forest floor increasing fire risk. This business plan has been modified to ensure that all the Forest Service needs to create a health forest with minimal ground disturbance is achieved while creating industry in a rural community. This last bid process with the Forest Service has proved a little frustrating as a private sector business holding financial investors interests while working out all the contractual details has proven difficult, but that is why we are all here today at this hearing. I hope that we will leave the hearing today with concrete ways to change the current laws surrounding the USDA FS stewardship contracting process.

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Key Topics

- Past, Present & Future
- Timeline
- Equipment
- Biomass Needs
- A local 5 MWe Power Plant (site map)
- Turkey Springs Biofuels Demonstration
- Benefits to Archuleta County
- Local Jobs!
Approximately 22 new local jobs



Past, Present & Future

We will utilize our past experiences incorporating present technology to create a sustainable project...turning struggles into opportunities.

Our Past History

- Fuel mitigation – 20 + years experience
 - Weminuche Ranch
 - Alpine Cascade Ranch
 - Echo Canyon Ranch
 - Hidden Valley Ranch
- Fuel mitigation frustrations
 - Limitations associated with burning
 - Had to be an alternative to burning and one that had multiple benefits to all
 - Depth of chips we left on the forest floor when using bull hog equipment

Improved Resources

- New Equipment
 - low impact
- New Technology
 - clean emissions
- Private Land Project
- Turkey Springs Biofuels Demonstration

Future

- 5 MWe power plant in Archuleta County
- If model is successful then we'll target multiple locations regionally
- Regional distribution rights in CO and parts of NM, AZ & UT.
- A 5 MWe power plant will supply approximately 30% of the current power usage in Archuleta County.

"I'm a business man trying to use a viable financial model to solve a natural resources problem"
J.R. Ford

Timeline

- Fall 2009 - April 2010 – order & delivery of equipment from Europe
- April 2010 – May 2012 – private land project
- Summer 2010 – Summer 2011 – Turkey Springs Biofuels demonstration completion
 - Current data collected has been conducive for moving forward
- Summer 2011 – open bid opportunity for 10 year stewardship contract.
- August 2011 – Chris Mountain contract awarded start date June 2012
- March 2012 – Long term Stewardship Contract
 - Could be awarded by the USDA FS with start date of July 2012
- Summer 2012 plant engineering design
 - reconfiguring from a 2 MWe to a 5 MWe
- 2013 – start up of power plant in Archuleta County

Forestry Equipment

Currently being used, has a proven track record for reliable and economic chip procurement as well as minimal ground disturbance to the forest.



Forwarder with chipper

- 8-wheel-drive forwarder with attached chipper, chip box, grapple and scales. Added feature of interchangeable rubber tires or tracks for adverse weather.

2 - Feller buncher with hot saw

- 6 arm extensions for diverse conditions.

Photos credit: Randi Pierce/The Pagosa Springs SUN

All our equipment will be tested for efficiency, head variation, ground disturbance, speed & operating costs



Biomass Fuel Needs

Field data results

- Estimated 45,000 green tons per year.
 - Acquired from public & private acreage.
- Estimate of 1,500 to 1,800 acres per year.
- 15 to 25 green tons per acre.
- 90% of our forest product will be between 5 - 14" DBH.
- Successful product procurement will be within a 50-mile haul distance to the power plant.

5 MWe Local Power Plant

- We'll take our wood chips to a local supply of electricity.
 - Wood chips will be 1.5" or less, need not be uniform and will include bark and needles.
- This technology's emissions are within the State of Colorado air quality standards.
- Our technology provider has a 2MWe commercial gasifying plant with over 3,000 operation hours.
 - Additionally they have a pilot plant with 18,000+ operation hours.
- Our plant will have a net-zero water usage with a product that has 18% moisture content or more.
 - 15% moisture or less will require water supplementation.
- 14 new local jobs in the power plant.



Pagosa Springs 5MWe Power Plant Site

• LPEA transmission lines run parallel with the plant site

• Currently next to land which is zoned for light industrial use



Benefits we see brought to Archuleta County

- The forest interface in Archuleta County will become a safer buffer for our residences from wildland forest fires.
- The forest thinning will be preemptive and will help:
 - mitigate beetle infestation
 - protect our watershed
 - forest health
 - increase groundwater supply.
- When this project is successful it should give Archuleta County the opportunity to create more economic development through private business.
- Reduction in green tonnage currently in Archuleta County’s waste management cells.

Local Jobs

Approximately 14 new jobs in the power plant and 8 new jobs in the biomass procurement group

Power Plant

- 1 - Plant Manager
- 5 - Plant Operators
- 5 - Fuel Handlers
- 2 - Maintenance
- 1 - Administration

Biomass Procurement Group

- 2 - Harvesters
- 1 - Whole Tree Chipper Operator
- 1 - Mechanic / Swing Operator
- 2 - Chip Transport Operators
- 2 - Truck Drivers

- Our project will create new job opportunities. Like a new Cant sawmill which would employ 8 additional persons.
- The power plant and affiliates will provide 22 jobs to a community where the median household income is less than \$52,000.00 per year, per the U.S. Census Bureau, 2008, and the unemployment rate is a staggering 10%.

Environmental

Maintaining the objective to improve our forest’s health & fire mitigation using one treatment procedure.

- Through the operation of their test plant our technology provider has **proven** that our plant will meet the current air quality standards required for the San Juan Wilderness Area.
- As long as our fuel product has high moisture content (typical of the San Juan Forests) our power plant will have a net water gain and all the excess water will be of quality for irrigation.
- After our treatment to the forest:
 - Should there be a wildland fire there will be less contamination to the domestic water supply.
 - Wildlife grazing habitat will be improved.
 - In our opinion an additional 25%+ of moisture will reach the forest floor after the area has been treated.
 - The treated area will have less likelihood of a catastrophic crown fire.
- Methane levels will be reduced by our removal of decaying timber.
- Information obtained from the Turkey Springs Biofuels Demonstration Site, shows positive results regarding the benefits to thinning the forest. Benefits are, but are not limited to, the overall health of the forest as well as fire mitigation.

Monitoring Notes & Questions

- We are committed to adjusting our operations to support the Forest Service’s monitoring and environmental requirements.
- Will our equipment remove the biomass in an efficient and cost-effective way? **Yes!**
- Will we have favorable environmental impacts? **Yes!**
- Quantifying the green tons per acre with the use of on-site scales. **Yes!**
- Current treatment costs to the government will be reduced. **Yes!**

Pre treatment thick understory creates high fire risk (picture below)



Desired outcome post treatment for a healthy forest (picture below)



J.R. Ford, Pagosa Cattle Company – 5/14/12 Exhibit B - Pictures of pre treatment and the desired outcome in a healthy forest; for testimony on “*Logs in the Road: Eliminating Federal Red Tape and Excessive Litigation to Create Health Forests, Jobs and Abundant Water and Power Supplies*”

Pre treatment thick understory creates high fire risk (picture below)



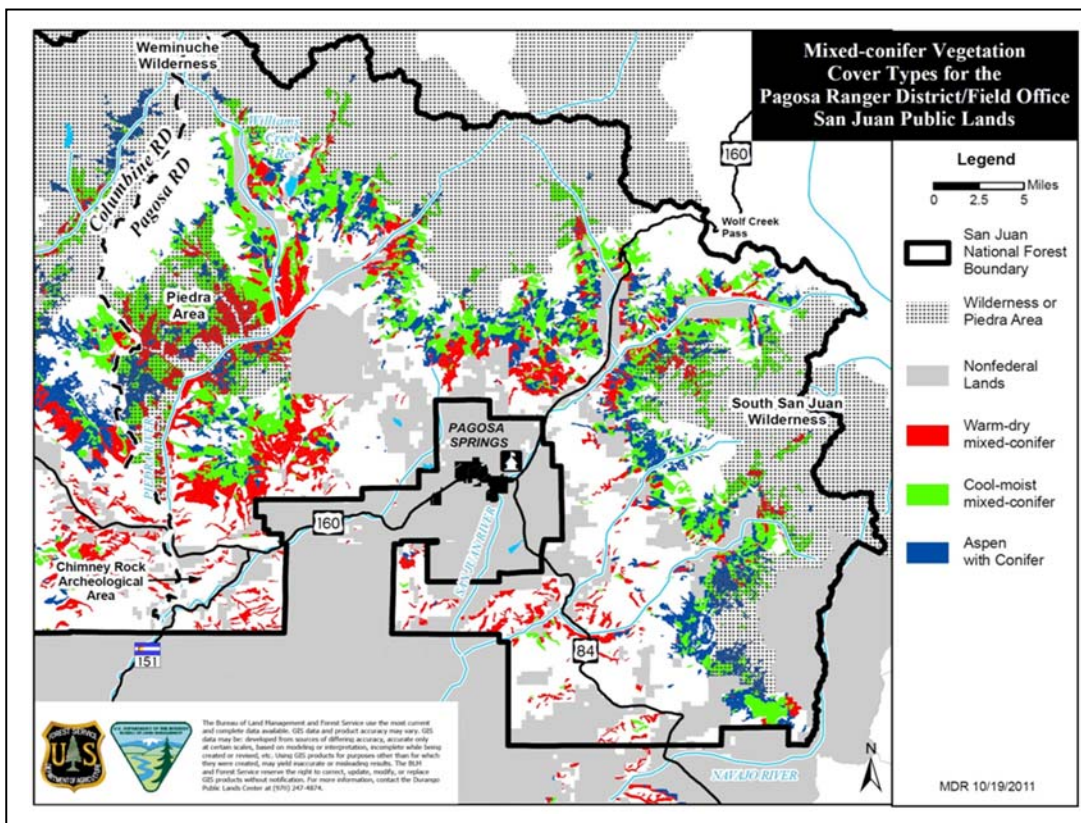
Desired outcome post treatment for a healthy forest (picture below)



Briefing Paper from the Upper San Juan Mixed Conifer Working Group May 2012

The *Upper San Juan Mixed Conifer Working Group* has been active since July of 2010. It was established to provide a venue to share stakeholder perspectives and to develop science-based collaborative priorities for management and monitoring of mixed-conifer forests on the Pagosa Ranger District (PRD) of the San Juan National Forest in southwestern Colorado. The majority of the San Juan National Forest's 235,000 acres of mixed conifer forests are on the PRD. The Workgroup members are people and groups representing business interests, conservation, local governments, recreation, ranching, and science, as well as many interested citizens. *The graphic on the next page shows a number of disconcerting trends in this forest type including insects and disease, threats from wildfire, etc. as well as the Workgroup's suggested priorities for where to work in the mixed conifer forest types to attain the "biggest bang for the buck."*

This map shows the mixed conifer cover types surrounding Pagosa Springs:



- After over 20 months of study and deliberation, the Workgroup concluded that more resources and action are needed to adequately address the range of complex issues these types of forests face.
- The Workgroup is launching a public education program which is necessary so interested and affected communities, residents and tourists understand more about the forests surrounding them and what they can do to work for forest restoration and health.
- In its next phase, the Workgroup will also assist with monitoring and evaluation of projects in these forest types.
- The Workgroup's Phase I comprehensive report will be published in June of 2012.

"Mixed conifer forests are perhaps the most variable and complex of any forest type in the southwest mountains in terms of species composition, stand structure, and dynamics. They also have received little research attention (Romme et. al. 1992). Consequently we have a relatively poor understanding of the long-term dynamics and interactions that have shaped mixed conifer landscapes in the past, and that explain biotic responses to current management activities."

Source: Report: "Historical Range of Variability and Current Landscape Condition Analysis: South Central Highlands Section, Southwestern Colorado & Southern New Mexico." William H. Romme, M. Lisa Floyd, and David Hanna . May 12, 2009.

Upper San Juan Mixed Conifer Working Group Goals, Trends & Priorities

Goals: Healthy Communities, Healthy Forests and Forest Restoration

TRENDS

NATURAL		UNNATURAL
	historic range of variation	→
	wildfire	→
	insects and disease	→
	development	→
←	public demand for goods/services	→
	invasives (weeds)	→
←	climate change	→

These trends influence the priorities

These trends influence the priorities

Priorities for Working in the Mixed Conifer Forests on the Pagosa Ranger District (USFS) and on Adjacent Private Lands

Actions taken should work to...

- ✦ *Improve and enhance healthy watersheds*
- ✦ *Create safer communities*
- ✦ *Promote healthy ecosystems for wildlife and people*
- ✦ *Encourage small scaled economic development projects*

Project Web site: <http://ocs.fortlewis.edu/mixedconifer/>

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