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Colorado

Colorado Piñons Transformed into Pellets for Heating Fuel

The BLM Uncompahgre Field Office is one of many community partners participating in a Sustainable Forestry and Renewable Energy Project that transforms piñon trees into pellets used for heating fuel. On Friday, October 13, Barb Sharrow, field manager of the Uncompahgre Field Office, joined U.S. Representative John Salazar as well as Rob Davis from the Forest Energy Corporation and Ellen Stein from the Mountain Studies Institute to celebrate the arrival of the first bag of Colorado Piñon Whole Tree Pellets in Silverton, Colorado. The pellets are made entirely from piñon trees harvested from Colorado public lands administered by the BLM.

“The BLM’s multiple-use mission in managing our nation’s public lands supports this very kind of project,” said Sharrow. “It’s a win-win situation for all involved—homes and businesses can benefit from a readily available renewable energy and our forests and public lands are healthier for it.”

This project promotes forest restoration and marks a movement toward the use of renewable energy in southwestern Colorado. Through cooperation between the Uncompahgre Field Office, BLM Colorado, and the USDA Forest Service, the benefits of using renewable energy technology and improving the health of Colorado’s forests are tightly packed into these tiny little pellets.

The region has thousands of acres of forests and woodlands in need of restoration and fire risk reduction. Whole Tree Pellets are a clean, carbon-neutral source of energy that can be used for heating everything from homes to hospitals.



Rob Davis visits with Barb Sharrow, Uncompahgre Field Office Manager, Representative John Salazar, and Carla Harper of Four Corners Sustainable Forestry.



Rob Davis of Forest Energy Corporation and Congressman John Salazar cut open a bag of pellets at the Mountain Studies Institute in Silverton, Colorado.

During winter 2005, the Whole Tree Pellets were used in a state-of-the-art pellet stove to heat the 102-year old historic Avon Hotel, headquarters for the Mountain Studies Institute. Located in Silverton at an elevation where winter arrives early and stays late, the hotel saw a savings of about \$1,500 in last year’s propane heating bills.

The payback from this type of program will come not only in dollars but in “sense.” As more Colorado communities take advantage of this homegrown renewable energy source, rural economies will be fueled and Colorado public lands and national forests will also reap the benefits of healthier forested areas. It just makes sense!

For more information contact Carla Harper at 970-565-6061 or the Uncompahgre Field Office at 970-240-5300.

Royal Gorge Field Office Begins Meeting Biomass Supply

Although forest experts agree that Colorado’s forests and woodlands are densely overcrowded with small trees, for the Aquila Power Plant in Canon City, supply actually is the most limiting factor to utilizing forest biomass as a renewable fuel source. With such a need and opportunity in Colorado forests and woodlands, the timing could not have been better for the



Biomass from BLM thinning project will be utilized by the Aquila Power Plant seen in the background.

Royal Gorge Field Office (RGFO) to be approved as a BLM National Biomass Demonstration Site.

Most forested stands along the Front Range of Colorado are well beyond historic fire intervals with heavy fuel loads, which resulted from fire suppression, grazing, and past timber harvests that concentrated on large tree removal. These conditions have led to some of the most destructive wildfires and largest bark beetle outbreaks since the settlement of Colorado. Failure to treat these dense, overstocked forests may have destructive impacts to the forests, watersheds, and surrounding communities.

The RGFO is meeting Aquila's supply situation through stewardship contracts. Under a stewardship contract, the value of vegetative material can be applied to offset the cost of services received. The Office awarded two small stewardship contracts that require biomass utilization in 2005 and a multi-year contract in 2006. These contracts will produce approximately 10-12 tons of woodchips per acre and

small amounts of low-value sawtimber. The main objectives are to improve forest health, reduce fuels, utilize biomass, and maintain the local forest industry. Currently, almost 600 acres of the RGFO are under contract and planning is underway on an additional 200 acres.

As fuels and stand densities are reduced on public lands, wildfire intensity and severity will be lessened, resulting in lower wildfire suppression costs. Air emissions will also be improved by eliminating the need for on-site slash pile burning, while woodchips utilized at the Power Plant emit less harmful chemicals when compared to coal. In addition, the projects meet many of the goals of the National Fire Plan and Cohesive Strategy, the Healthy Forests Initiative, and the Healthy Forests Restoration Act.

The service cost for these stewardship contracts is approximately \$800/acre. These contracts included additional activities such as meadow restoration, gate installation, and road maintenance and improvement. Service costs for the stewardship contracts were higher than expected, but costs are expected to drop in the future as the local forest industry and Aquila become more accustomed to utilizing biomass. The RGFO is planning to utilize several thousand tons of forest biomass each year over the next five years.

The International Center for Sustained Technology (ICAST) recently received a grant from the Department of Energy to study the feasibility of combining woodchips with fly ash to make a briquette. Fly ash is the waste from a power plant's burning of coal, which locally results in 50 tons of waste going to the landfill each day. Fly ash still contains BTU's of energy, which would be captured in the fly ash/woodchip briquette. This could double the value of the woodchips and make the endeavor more cost effective. In addition, the State of Colorado recently passed a renewable energy initiative requiring utility companies to produce a percentage



Arkansas Mountain area before (left) and after (right) treatment.

of renewable or “Green” energy. The program is expected to result in increased future use of biomass fuels and benefits to consumers, public land users, and the public in general.

For additional information, please contact Ken Reed, Forester, Royal Gorge Field Office at (719) 269-8576 or Paul Trentszch, Renewable Resources Supervisor at (719) 269-8554

New Mexico

BLM and USFS Partner Together to Further Fire Prevention and Public Information Efforts in Southwestern New Mexico.

Southwestern New Mexico has been witness to the evolution of a unique partnership between the BLM Las Cruces District Office and the USFS Gila National Forest. This has resulted in many benefits to these agencies fire programs in the areas of public information and education. Fire Managers from the BLM and Forest Service decided on the concept of co-funding one individual accomplish duties that were common to both agencies’ need to spread the word about fire prevention and fire management tactics. Loretta Benavidez, who had recently been appointed as the Wildland Urban Interface specialist on the Gila National Forest, was identified as the best candidate to help spread the interagency message. The Forest Service agreed to host Loretta at their office in Silver City, pay 50 percent of her salary and cover all overhead costs, while the BLM pitched in the remaining salary cost and budgeted for some travel expenses. Over the years as the programs have become well established, the need for travel has lessened and the BLM investment has dropped to 25%, but the both agencies programs’ effectiveness and public image has increased enormously.

One of the priorities was identifying fire-prone urban interface areas across seven counties where jurisdictions



Loretta delivers a presentation on good and bad fires to a host of school kids in Santa Clara, New Mexico.



Loretta Benavidez, while wearing the Forest Service uniform and using Smokey to deliver her fire prevention message, is always preaching the message to include fire safety on all of our public lands.

were largely represented by BLM, Forest Service or both. In working with communities, strong relationships began to develop among many of the rural volunteer and municipal fire departments and through careful coordination, wildland fire training became more available to non-federal partners. As the program evolved and collaborative relationships strengthened, more opportunities materialized. Smokey Bear began to make guest appearances to schools in small, rural villages like Lordsburg, Animas, and Deming. Bilingual programs were also made available to Columbus Elementary School, which lies along the US/Mexico border. “Good Fire/Bad Fire” campaigns and teaching materials, zip games, and the “BLM Buddies” began reaching children of all ages in schools that had historically only associated Smokey Bear with the US Forest Service.

Within the last four years, FIREWISE workshops have been organized in three counties and the concept of defensible space has become common knowledge to most communities that are vulnerable to threats from wildfire. Prevention planning and implementation became evident across the southwest and jurisdictional lines became blurred. In 2000 and 2001, Loretta was invited to participate in two separate international events, one in Guatemala to assist with fire prevention planning sponsored by the BLM, while the second was to Michoacan, Mexico as a member of an instructor cadre for wildland fire training sponsored by the Forest Service.

As a Public Information Officer Type 2, Loretta has been involved with numerous wildfires, wildland fire use events, and prescribed fire incidents that have required a clear message and precise information to internal and external audiences. Loretta served as the lead Public Information Officer on the Southwest Area Fire Use Team and has established a regional fire information center in her office and is co-located with the Gila Las Cruces Interagency Zone Dispatch Center. Loretta has staffed information booths during BLM prescribed fire activities in the villages of Timberon and Pinos Altos and has escorted television and news media to these events as a means for achieving public notification and education goals.

In 2005, Loretta was the lead instructor for S-203, Introduction to Incident Information and eight of the class participants were from within the Gila Las Cruces Zone. The overwhelming success of this course was made possible because of the interagency support regarding logistics and the tremendous effort of the 30+ interagency team members – many from the BLM – who carried out the “dreaded” simulation. Several “well-seasoned” cadre members mentioned that it was one of the best simulations that they had seen in an S-203 course.

Over the past two years, the federal agencies have been instrumental in assisting partners at the state, local, and county levels in the completion of Community Wildfire Protection Plans (CWPP) in three counties that contain both BLM and Forest Service lands. Communities today have a much greater understanding of hazardous fuels, hazard mitigation, fire prevention, mechanical and prescribed fire treatments, and wildland fire use and they are increasingly aware of the risks... both their personal risk and the risk to firefighters. This achievement is thanks to efforts by dedicated public servants like Loretta.

Portions of the Pecos River Being Restored in Three Not So Simple Steps

The Pecos River, one of the major tributaries of the Rio Grande, flows for 926 miles through the eastern portion of New Mexico and into neighboring Texas before it empties into the Rio Grande. Pioneering travelers described the river as generally sixty-five to a hundred feet wide and seven to ten feet deep, with a fast current that was only fordable in a few places. Today, the flows of the once great Pecos River have dwindled due to both natural and man-induced causes. As water quality and streamflows have declined, salt cedar and other introduced plant species have taken hold and now dominate the riparian systems within the watershed.



Salt cedar extraction begins.

The Roswell Field Office is continuing its efforts to restore its sections of the Pecos River by using an integrated approach in removing salt cedar. The project, located in southeastern New Mexico, involves the use of BLM fire, fuels, and resources staff as well as private contractors. In addition, both grazing permittees and the New Mexico Department of Game and Fish have been cooperators in this on-going project.

In 2004, BLM designed a strategy to restore the river corridor that begins with contracted extractors attached to backhoes or excavators that remove the salt cedar plants while protecting the native cottonwood trees. The BLM fire staff, along with interagency cooperators, then use prescribed fire to clean up the removed vegetation and restore nutrients to the soil. The



Piles of salt cedar being burned.



Native grasses returned to area previously covered with salt cedar.



The river corridor area after successful implementation of the second treatment.

Carlsbad Field Office's Pecos River Saltcedar Control Project

The Pecos River Saltcedar project is located nine miles Southeast of Carlsbad, New Mexico, along the banks of the Pecos River. The project is approximately twenty-five miles long encompassing a total of 1600 acres. The project work was conducted through a cooperative effort between the BLM, the Carlsbad Soil and Water Conservation District, and the Carlsbad Field Office. The goal of the project is to remove the salt cedar from the river banks, which will eliminate the high water intake required by each tree resulting in greater river flow. It has been estimated that a salt cedar tree with an eight inch diameter takes in 200 gallons of water or more per day.

The BLM Carlsbad Field Office and the Carlsbad Soil and Water Conservation District are hoping this project will be embraced by the community and contribute to the effort of replacing the salt cedar with willow and cottonwood trees. The River Blitz, a once-a-year event, encourages the community to pull together and clean up the river banks along the Pecos River. This event hopes to provide a healthy riparian habitat for wildlife and give nature a boost in restoring native trees, grasses, and other plants.

next follow-up action is applying a ground-based chemical treatment to any sprouts or seedlings of the invasive species.

In several plots where all three treatments have been completed, native grasses have returned quickly and thickly, exactly the result the office was hoping for. This early success in a project that will extend for years to come is both rewarding and reassuring that this damaged ecosystem can be restored to its former self.

Contact: Allen Wyngaert, (505) 627-0313



Aerial Treatment of live salt cedar by the Pecos River.



Prescribed burning along the banks of Pecos River.



Extracting Previously treated salt cedar from the banks of Pecos River.

The Soil and Water Conservation District initially began the salt cedar elimination project in 2002, using an aerial spraying treatment. The aerial treatment was followed by the use of extraction equipment to uproot and pile the salt cedar. During the two years it took for the treatments to take their full effect, the BLM began further implementation of the eradication plan. Under favorable weather conditions, the BLM began burn preparations by black lining around oil and gas infrastructures and creating a barrier between the Wildland Urban Interface so that the piles of salt cedar could be burned safely.

With the cooperation of these agencies and the weather, teamwork proved successful!

Utah

Prescribed Fire Attracts a Meeting of the Minds

A team of researchers representing five universities have teamed up with the BLM Salt Lake Field Office (SLFO) to conduct a series of treatments including prescribed fire on public lands in between the towns of Rush Valley and Vernon, Tooele County. Fire officials are planning to conduct a prescribed fire treatment within the next week, weather permitting.

“This project has been interesting so far,” says Fuels Manager Brook Chadwick of the SLFO. Chadwick describes, “The area, known as the Onaqui site, is only one in ten sites to be

chosen nationally due to its unique vegetation composition.”

The SLFO is known for its attention to detail, which was one of the reasons the office was the only district in Utah to complete implementation of prescribed burning, mechanical, and herbicide treatments. This particular project site was over 1,000 acres and very complex in terms of weather and resources.

The prescribed fire treatment is only one small part of a large scale project called, SageSTEP (Sagebrush Steppe Treatment Evaluation Project). Healthy sagebrush steppe communities in the Great Basin are rapidly disappearing due to invasion of non-native plants, catastrophic wildfires, and encroachment of pinyon-juniper woodlands. SageSTEP is a 5-year study that will explore ways to restore sagebrush communities. The project is fully interdisciplinary, with ecological, economic, and social components.

The Joint Fire Science project is history in the making, and a university film crew wanted to document the event. One of the head researchers, Dr. Bruce Roundy, even went through



Incident Commander Steve Jackson made sure all predetermined conditions were met before the burn was implemented.



Onaqui Juniper Burn utilized a helitorch to burn out the interior of the study plot.



Implementation of the SageSTEP Onaqui prescribed burn.

wildland fire training, received his red-card and carried a drip torch alongside BLM firefighters. Not bad for a 50+ year old.

The SLFO implemented a SageSTEP Onaqui burn in September. The fire was estimated to have blackened 70 percent of the treatment plot. Researchers wanted at least 90 percent, so the SLFO went back through the plot to burn a few small islands to accommodate research needs.

For more information check out www.sagestep.org or www.ut.blm.gov.



A university film crew captures the prescribed fire event.

Wyoming

The Newcastle Fire Defense Zone

The Newcastle Fire Defense Zone has helped established a hazardous fuel reduction treatment area which serves as a defensible space around the community of Newcastle, WY. Essentially, this practice takes the concept of a “Defensible Space” around a home or single dwelling, and expands the concept to encompass an entire community. Recent fire dangers throughout the Intermountain West have repeatedly demonstrated the need for this level of treatment in reducing fire threats in Wildland Urban Interface areas.

Several homes and private establishment are currently located adjacent to or near BLM land. Community and housing development within the Wildland Urban Interface (WUI) zone have increased over the past 10 to 20 years, a trend that is expected to continue in the future. Treatment units are also strategically located in areas essential to firefighting and suppression efforts, due to the terrain and vegetative cover.

Many historically open meadows within the treatment areas have slowly become overgrown with Ponderosa Pine and Juniper vegetation. These meadows offer an invaluable level of protection during wildfire suppression operations. The encroachment of Ponderosa Pine and Juniper results in a “closed canopy” that places the entire area at a much higher risk of catastrophic fire.

Other portions of the treatment area are dominated by heavily stocked Ponderosa Pine stands. These stands contain a dense stocking of understory “ladder fuels.” These “ladder fuels” carry ground fires up and into the overstory canopies during wildfires, ultimately contributing to dangerous crown fires.



Wyoming BLM State Director Bob Bennett and Deputy State Director Mary Trautner are briefed by NS Christian Frank on Mechanical Fuels Reduction operations.



Equipment operator Todd Bonny explains the unique advantages of the custom grinding head used by Swaggart Enterprises in mechanical fuels reduction to Wyoming BLM State Director Bob Bennett.

There have been two primary goals of the Newcastle Fire Defense Zone. The first is to return vegetative conditions within the treatment area to a condition which more closely resembles the “Pre-Fire Suppression Era” condition. The second is to provide pre-positioned and replanned areas where future fire suppression efforts can be made more safely, and with a greater chance for overall effectiveness and success.

Although BLM treatments have been primarily located only on federal lands, the overall success of the Newcastle Fire Defense Zone relies heavily upon the coordination and support of other nearby management agencies, as well as many individual private landowners. In order for the Newcastle Fire Defense Zone to be effective, treatments must tie in directly from one private owner or management agency to another. To aid in this process, coordination and information sharing has been provided to all neighboring landowners and nearby land management agencies, as well as the local community leaders of Newcastle.

Several landowners within this WUI have already begun the somewhat labor-intensive and costly process of reducing hazardous fuels in and around their homes. Wyoming State Forestry incentives have already been used on several different private landowner tracts within the zone, some of which are located directly adjacent to BLM lands. This continued program has been and will continue to be a key component to the overall success of the plan.

The size and level of this treatment area has provided many unique challenges. First and foremost, the level of coordination and planning required has been a challenge. Common goals and objectives needed to be identified between all affected landowners and agencies prior to the

initiation of the project. In order to facilitate this, the BLM developed a Five-Year Plan which was provided to local community leaders and local government agencies for input and comment, as well as all neighboring private landowners. Ultimately, this Five-Year Plan informed adjacent landowners and local agencies of the overall direction of the project and set goals and timelines for implementation.

Traditional “Thin and Slash Pile” treatments were implemented at the beginning of the plan, but treatments were very costly, labor intensive, and included the need for pile burning of cut slash for removal. This posed a second unique challenge for on-site technical specialists and managers. A cheaper, more complete and more timely method of treatment was needed.

Hand crews and mechanical treatments were compared during the first year. Agency personnel quickly identified the cost savings and effectiveness of mechanical treatments, rather than traditional hand crew treatments carried out with chainsaws. The unique capabilities of the mechanical equipment not only allowed pine encroachment treatments, but Ponderosa Pine thinning operations as well.

Nearly all treatments after the first year were completed utilizing mechanical grinding operations. Mechanical operations not only increased the speed of implementation, but also eliminated the need for slash pile burning and reduced costs dramatically. Ultimately, this Five-Year project was completed one year early, largely due to the timeliness and cost effectiveness of this unique equipment.

Several lessons were learned during the implementation of the project. Most of these lessons involved identifying ways to further improve the overall success of the project. One such step involved broadcast seeding of native grasses and forbs in timbered areas just prior to treatment. The goal



Equipment Operator and contractor representative Todd Bonny begins grinding demonstration.

of this practice was to avoid possible Cheatgrass infestations when the timbered stands were thinned. The majority of the timbered stands were very thick and dense prior to treatment, with very little grass in the understory. After thinning these stands, the understory will receive much more sunlight and grass cover will become more prominent. Without the seeding of beneficial native grasses and forbs, these areas would be highly susceptible to non-native Cheatgrass infestations.

Another lesson learned involved utilizing wildlife cover pockets and identifying key wildlife habitats to ensure area wildlife populations were not negatively impacted. Wildlife biologists and range management specialists from both the BLM and State of Wyoming were involved in all initial planning and layout of this project. Key wildlife habitats such as turkey roosting sites were identified and protected accordingly. Additionally, steps were taken to ensure affected wildlife corridors were maintained through treatment units, utilizing key positioned areas of untreated vegetation. These wildlife cover pockets maintain the overall diversity required to ensure affected wildlife habitats are maintained in the project area, and provide areas of thermal and security cover. Another step involved the protection and enhancement of all hardwood species present within treatment areas, further improving overall habitat diversity and wildlife viability.

Completion of this multi-year project provides an opportunity to reflect upon accomplishments made. More importantly, it provides one example of the process required to implement “landscape level” projects which are required to effectively reduce wildland fire threats in the Intermountain West. This process will be used as an example for future landscape-level treatments within the Newcastle Field Office Resource Management Area.

Most importantly, the Newcastle Fire Defense Zone will continue to be improved, built upon, and maintained as a viable range, timber, wildlife, recreation, and fire protection resource for the community area of Newcastle, WY.



Before (above) and after (below) photos of the 2005 Newcastle Fire Defense Zone in Newcastle, Wyoming.

