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Oregon

Little Canyon Mountain Fuels Reduction Project

Little Canyon Mountain is adjacent to the communities of Canyon City and John Day in Eastern Oregon. In fact, the northern edge of the mountain is only one mile from town. Approximately ten homes lie adjacent to the BLM public lands that include Little Canyon Mountain.

The BLM public lands in this remote area of eastern Oregon are densely populated by dry ponderosa pine stands with Douglas fir present in many areas. Historic management actions have suppressed wildfires, encouraging continued growth of the forest stand without substantial human intervention via timber removal or thinning. At this time, at least four insect species are infesting trees on the mountain and causing tree mortality.

Last year concerned citizens of Grant County formed a grass roots working group to discuss the fire hazard present in their communities. They requested the BLM take action to address the immediate danger threatening their homes due to the buildup of fuels on adjacent public lands. The Central Oregon Resource Area for the Prineville District BLM listened to the citizens' concerns and



Little Canyon Mountain circa 1898-1904



Little Canyon Mountain 2002

then proceeded to identify and implement both short and long-term solutions on the federal land.

To immediately address the hazard to private homes, the district prepared a categorical exclusion that treated 70 acres adjacent to homes. Trees less than 12 inches in diameter were pre-commercially thinned and removed; the remaining trees were pruned up 10 feet from the ground. The underbrush was removed and slash was piled. Hand crews, small mechanical devices, and low-ground impacting machinery accomplished this work during October 2002.

Currently, a Central Oregon Resource Area team is drafting an environmental assessment to assess current conditions, propose management alternatives, and identify the preferred alternative. The primary goal is to address the potential fire hazard in the area. Also included in the assessment will be issues associated with forest health, road access, off-road vehicle use, and garbage dumping. More detailed information on the Little Canyon Mountain Hazardous Fuel Reduction project may be found at <http://www.or.blm.gov/prineville/LCM/home.htm>.

Local landowners are doing their part by working with the Oregon Department of Forestry to create defensible space on their private property. Many of these are being accomplished through National Fire Plan grants.

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Key Point Four Group Meets in Reno

State and Federal Prevention, Education, and Mitigation Specialists recently met in Reno to share information and coordinate efforts in support of the Key Point #4, Community Assistance, of the National Fire Plan. Key Point #4 implements activities that will reduce the wildfire threat to Communities and increases the firefighting capacity of local fire departments. The interagency group included State and private representatives from North Dakota, Montana,



Jackson Bird (l) and Susan Stockert (c) of the North Dakota State Forest Service explain their rural fire guide to Jon Skinner (r) from BLM's Idaho State Office.



Mike Dannenberg from BLM's Montana State Office coordinated the Key Point Four meeting.

Idaho, Utah, Nevada, along with federal partners from the BLM, U.S. Forest Service, and the BIA. Information about state implementation of National Fire Plan activities was shared as well as work being done by the federal partners. Discussions on the elements of Key Point four included Community Assistance, State Fire Assistance, Volunteer Fire Assistance, Economic Action Programs, Rural Fire Assistance, and Firewise, programs were shared with the attendees.

A number of issues were identified which will require follow up work to help achieve better

coordination among agencies as a part of the overall implementation of community assistance activities. Among these was the need for establishing internal communications forums to ensure state government programs and federal activities are meshing correctly to obtain the best results under the National Fire Plan.



Dean Graham (l) and Dave Atkins (r) from the U.S. Forest Service Economic Action Program in Missoula, Montana display some non-traditional products manufactured from small diameter wood.



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Memorandum Will Help Fire Departments

On January 13, 2003 an important memorandum of understanding was signed by senior executives of several agencies. The memorandum, entitled *Coordination and Cooperation of Fire Department Wildland Fire Assistance Programs*, includes agencies of the U.S. Department of Interior, U.S. Forest Service, Federal Emergency Management Agency-U.S. Fire Administration and National Association of State Foresters.

Al Murphy, BLM's Chief of Community Assistance at the National Interagency Fire Center provided copies of the signed memorandum to the specialists at the Reno meeting. Murphy coordinated with key officials during the past year in order to achieve agreement for the memorandum. He explained the background, and how it can help in carrying out the assistance programs.

The agreement will provide a general framework for cooperation and coordination among the signatory agencies in the delivery of wildland fire assistance to fire departments. There are a number of different grant programs available to fire departments from the

various agencies, and the memorandum is a tool to promote consistent and systematic federal assistance as part of the national effort to improve firefighter safety, protect property and save lives.

One of the benefits from the agreement will be to make it easier for rural and volunteer fire departments to learn about the various grant programs and to complete necessary application procedures in order to compete for grants.



Al Murphy (l) from BLM's Office of Fire and Aviation talks with Donna Hummel of BLM's California State Office about the recently signed memorandum of understanding.

Colorado

Fuel Break for Community Protection

BLM's White River Field Office located in Meeker, Colorado, sits in one of the highest fire occurrence regions in the state. Known locally as China Wall, the ridge west of town has been the site of three fires over the past 12 years. Sage Hills subdivision sits at the foot of China Wall. The continuous blanket of pinyon/juniper, sagebrush and grass would lead a fire directly to the subdivision and into town.

The fire history and proximity of the subdivision led local fire management officials to identify China Wall as a priority for a hazardous fuel

reduction project. Discussion and planning with county and city managers for the China Wall project began in 2000. However, the Black Diamond Fire ignited over Memorial Weekend 2001, with fire coming within 250 yards of homes in the subdivision, zone Fire Management Officer Garner Harris recommended placing a dozer line directly behind the homes on county property. The groundwork for collaboration between the zone officer, county and city officials had been laid with previous discussions regarding the proposed fuel break. They agreed to take advantage of the situation nature handed them by extending the dozer line to include the northwest end of Meeker and incorporate the maneuver in the fuel reduction plan.



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The China Wall hazardous fuel break system was designed to provide community protection and firefighter safety for both defensive and offensive actions. Integrating preplanned escape routes and safety zones put firefighters in a more offensive position tactically. Improving access was crucial for wildland and structural suppression actions. Predominant winds are out of the southwest, so the location affords west/southwest protection to the community. The project also created defensible space around two communication sites.



Photo was taken looking north from a communications site as brushbeating the sagebrush was done.

Thinning the pinyon/juniper trees and Gambel oak opened the canopy minimizing the potential for running crown fires. The mechanical thinning was performed by a contractor with a hydro-axe while fire crews conducted hand thinning on the steeper slopes. Brushbeating was used in the sagebrush. The debris resulted in 200 slash piles which were burned during the winter with snow on the ground and to meet all the air quality standards. This was the first hazardous fuel reduction project conducted by the Craig/Routt Fire Unit under the National Fire Plan.

Deer Haven Ranch

The BLM Royal Gorge Field Office, in Canon City, Colorado completed phase II of the Deer Haven Mechanical Fuels and Prescribed Fire Treatment in October of 2002.

Deer Haven Ranch consists of 4,900 acres acquired from the Mellon Foundation and the Conservation Fund about ten years ago. The property is primarily ponderosa pine and pinyon/juniper woodland and sits at an elevation of from 7,000 to 8,000 feet. The ranch provides important habitat for mule deer, elk and wild turkey but the exclusion of fire over the last 100 years had resulted in thick stands of small 10-20 foot ponderosa pine trees throughout the older mature stands of ponderosa pine. Pinyon pine had severely invaded what had been a mosaic of pinyon/juniper woodland, north slope ponderosa pine and open grassy meadow areas. The heavy concentrations of fuels had degraded wildlife habitat and posed a threat to developed private properties in the northeast



Typical underburn fire in ponderosa pine.



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corner. New subdivision development on the northern perimeter and the northwestern corner could also be threatened by a large wildfire.

Phase I consisted of hand thinning 410 acres primarily to reduce stand densities near the High Park Subdivision and to remove invading pinyon in natural meadow areas. Phase I was completed in August of 2001 and featured in *Snapshots* in October, 2001.

In Phase II, 122 additional acres of hand thinning was completed, largely in ponderosa pine stands. The objective was to remove young, invading trees while maintaining the older trees in the stand. This work was completed in the spring of 2002.



Roads and constructed handlines were used for control lines. Isolated Gambel oak clones are difficult to kill.



Leaves of the Gambel oak.

Gambel oak (*Quercus gambelii*) is a commonly found native species found in many parts of the western United States. Commonly called scrub oak, it is drought tolerant and grows to an average of 20-30 feet in height. Leaves are about five inches long with several rounded deep lobes on each side of the center vein. The plant produces acorns as well as shade and cover for wildlife.

Prescribed fire was intended to be used in the ponderosa pine stands to re-introduce fire to the ecosystem. It was anticipated that the fire would reduce heavy slash volumes from the thinning activities, rejuvenate old, decadent forage species, create additional openings in the canopy and remove additional ponderosa in the understory. Natural accumulations of dead and down fuel would also be reduced.

In October, 2002 a window that met prescribed conditions allowed the burning of approximately 200 acres of ponderosa pine, pinyon/juniper, Gambel oak and grass on units that had been thinned in the spring and others thinned in 2001. Three burn units were completed ranging in size from 25 to 125 acres. Slash that was remaining from the thinning projects was entirely consumed by fire. Damage to larger, reserve trees, generally exceeding 6 inches in diameter, was minimal. Some scorch occurred on tree boles and, in a few instances, trees torched to the top. Gambel oak and mountain mahogany on south slopes appeared to be top-killed and should sprout producing better quality browse in the future.

The project was completed as a cooperative effort. Cooperators providing funding included the U.S. Forest Service, Rocky Mountain Elk



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Foundation, Colorado State Forest Service, Tallahassee Volunteer Fire Department and BLM. Additional assistance was provided by Colorado Division of Wildlife and the grazing permittee, Aaron Atwood.

Monitoring of the effectiveness of the project is being accomplished through a series of photo plots established before activity to visually assess changes in the site. One hundred foot transects, established prior to activity measure pre and post burn vegetative diversity, species composition and changes over time. Visual assessment of wildlife use is also documented.



Gambel oak top kill success is higher when associated with higher fuel volumes.

Additional phases are planned for the ranch. Similar work will occur over much of the property although prescriptions for both thinning and burning are modified for site conditions and to determine what works most effectively to obtain planned objectives. For 2003 an additional 175 acres are proposed for thinning and an additional 200 acres for burning.

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Wildfire Hazard Mitigation Proves Profitable for Durango Developers

Eric Stone and Tammy Tyner of Timber Tech West, a forestry company located in Durango, Colorado, report that hazard mitigation in rural subdivisions results in quicker sales and higher prices for treated lots compared to those that have not been treated¹. They observed increases in values from 10 to 30 percent amounting to roughly \$2000 per acre on the average. Mitigation costs ranged from \$150 to \$600 per acre. The following table includes information they collected from five of the subdivisions where they have worked.

Subdivision Name	Location (Colorado)	Nature of Work	Typical Lot Size	Untreated Land Value	Restored Land Value
Elk Park	Pagosa Springs	Timber thinning, brush reduction	3-9 acres 35 acres	\$90,000 \$270,000	\$100,000 \$320,000
Timber Ridge	Pagosa Springs	Brush reduction	3-5 acres	\$95,000	\$120,000
Tomahawk	Durango	Timber thinning, brush reduction	3-5 acres	\$65,000	\$85,000
Elk Stream	Mancos	Brush reduction	3-5 acres	\$250,000	\$325,000
Rafter J	Durango	Brush reduction	3-5 acres	\$75,000	\$85,000



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Increased value of the lots appears to result mostly from improved aesthetics. The authors state, “For most people, aesthetic appeal provides a basis by which the project’s success can be measured. Because we do a lot of work for real estate people, we have found that ‘improved curb appeal’ has a very positive effect on lot sales and subsequently, lot prices.”

Many of the lots that Timber Tech treats grow thick with brush. Brush reduction results in more open areas and views more appealing to potential buyers. At Timber Ridge, for example, several lots overgrown with brush were not selling. After selective thinning and removal of unwanted vegetation, the lots sold almost immediately. Sale of the lots allowed the developer to begin another phase of the project.

The authors report that developers tell them that hazard mitigation treatments allow them to sell land more quickly and for more money. They estimate that, “...for every thousand dollars spent on restoration work, three thousand dollars can be made when a lot is sold.” They believe that the three to one ratio is a conservative estimate. Stone and Tyner’s results suggest that wildfire hazard mitigation in the wildland urban interface can be profitable for landowners and sustain a local hazard mitigation and forest restoration industry. Timber Tech is only one of several such companies now operating in southwest Colorado.

¹ Eric Stone and Tammy Tyner. September 2002. A Process and Economics Report on Forest Restoration and Wildfire Mitigation in Southwest Colorado. (Report to the Four Corners Sustainable Forests Partnership.)

Southwest Fire Social Science Collaborative Formed

Bureau of Land Management, US Geological Survey, and US Forest Service social scientists have joined with social scientists from universities in the four corners states to form the Southwest Fire Social Sciences Collaborative. The purpose is to support agencies implementing the National Fire Plan and related land health programs by providing the best and latest social science to both fire managers and local communities.

A principal focus is on improving collaboration between managers and local communities wishing to implement the National Fire Plan in the wildland urban interface. However, the collaborative intends to address other areas where social sciences can be applied including fire and smoke education, program evaluation and accountability, training, community assistance, and technology transfer and innovation.

Members of the collaborative have years of experience in fire social science, some dating prior to the Wildfire Strikes Home era. Disciplines represented include sociology, psychology, economics, political science, and anthropology together with applied areas such as communication, community development, and policy analysis. Social scientists from other fields are expected to join. Several of the social scientists are represented on the National Wildfire Coordinating Group Fire Social Sciences Working Group.

The Southwest Fire Social Science Collaborative proposes a multi-year action-research and experiential training program based in a variety of Southwest wildland urban interface communities. The program will address real problems encountered during National Fire Plan implementation. Fire managers and others will participate in the program, learning how to work with communities in collaborative fire management across boundaries of ownership, jurisdictions, and cultures.



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The result will be a curriculum and process for training managers in collaboration methods that are grounded in real community-based experiences. The collaborative is committed to addressing the needs of fire and land managers as they themselves see them and to communicate social applications in ways that managers find most useful and appropriate.

They met with other fire social scientists from across the United States at the “Humans, Fire, and Forests: Social Science Applied to Fire Management” workshop in Tucson, AZ January 28-31. The Workshop purpose was to begin to specify what is known in social science that is directly applicable to fire management and to identify immediate research and development needs. Several representatives from land management and wildland fire made presentations and participated in the working groups.

Those in attendance agreed to develop a framework for social science applied to fire and land management in order to facilitate collaboration among researchers and managers, to begin to prepare messages that show how social science principles can be applied in fire management and to communicate those messages through the channels that fire and land managers use.

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Nevada

Tough Fuel Break Stops Another Fire North of Winnemucca

A 70-mile fuel break north of Winnemucca, Nevada, has proven its worth for the second time in two years.

Late in the 2002 fire season over Labor Day weekend Many of the BLM firefighters at the Winnemucca station had already gone home for the day.

During the holiday, a motorist on State Highway 95 didn't notice that one of the tires on a vehicle he was towing had gone flat, and the bare steel rim was throwing out sparks.

By the time the driver realized what had happened, the sparks had ignited five fires along a 10-mile stretch on the west side of the highway. When firefighters arrived at the scene, they found that much of the fire had been stopped by the fuel break on the west side of the road. As a result, those September 2 Andorno Complex fires consumed only 12 acres.

Mike Bland was the engine foreman at the fire. He said the fuel break made his job a lot easier on that Sunday night in September.



Another view of the fire with wildland fuels and improvements in the background.



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Fuel break along State Highway 95.

“We were able to quickly knock down the fire and move on to the next one,” Bland said.

One of the fires was headed directly toward the nearby Wilson Ranch, but the fuel break stopped the blaze before it could do any damage.

These fires could have been much worse. Large stands of sagebrush lay on the other side of the fuel break, and many ranches would also have been in the fire’s path.

Just 20 miles south of the Andorno Complex fires, the same fuel break had been in the path of the August 2001 Dutch Flat fire. The fuel break

slowed the fire just enough so that firefighters were able to quickly extinguish a small five-acre “slop-over” after the wildfire jumped the fuel break.

A fuel break on State Highway 447 also stopped a wildland fire in August 2001.

The BLM Winnemucca Field Office created three fuel breaks along highway rights-of-way in June 2001, in cooperation with the State of Nevada Department of Transportation. Since then, BLM has completed maintenance and extensions of three major fuel breaks. Included are a 70 mile stretch along State Highway 95, north of Winnemucca, 26 miles along State Highway 447, south of Empire and Gerlach, and 40 miles along State Highway 140 South of Denio.

Each plowed 16-feet wide. The total soil disturbance for all three fuel breaks is only 250 acres.

According to Mike Whalen, fire ecologist for BLM Winnemucca, “The original concept for creating highway fuel breaks was to protect the \$8 million dollar investment used for fire rehabilitation efforts.”

The fuel breaks have successfully protected BLM’s fire rehabilitation work, but they have also saved both property and lives from wildland fire.



Highway 95 fuel break at the Wilson ranch on Andorno Creek. This was the closest the fire came to ranch structures. The fuel break protected the ranch.



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BLM Winnemucca Completes Ten Greenstrips in 2002

The BLM Winnemucca Field Office completed ten greenstrip projects during fiscal year 2002, for a total land disturbance of about 750 acres.

The greenstrips are approximately 100 yards wide and three-fourths to 3.5 miles in length, and are covered with fire resistant and fire tolerant vegetation. The greenstrips are intended to meet objectives for enhancing watersheds and providing for sufficient quantity, quality and diversity of wildlife habitat.

Benefits from greenstrips are to reduce the size and frequency of wildfires. Suppression, and rehabilitation costs go down and reduction of invasive noxious weeds is achieved. Greenstrips also protect critical sagebrush habitat for wildlife and rangeland for livestock forage, reduce soil erosion, and prevent invasion of annual species by the maintenance of perennial species.

Each greenstrip project will be excluded from livestock grazing for a minimum of two growing seasons. Livestock will be excluded in order to help seeded species get established in the greenstrips. This will allow the seeded species sufficient time to germinate seed, develop adequate seedling root growth to prevent uprooting by grazing animals, and develop good vigor for seedlings, which can eventually produce viable seed.

BLM will monitor these greenstrips and the resulting data will be studied to evaluate their success in slowing or stopping wildland fires, determine whether or not the seeding is able to withstand grazing, and determine if the forage Kochia planted in the greenstrips is invading the surrounding natural vegetation.

The greenstrips will also be monitored for the presence of noxious weeds.



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