

# Snapshots 2004

Highlighting BLM projects that support the National Fire Plan.



September 24

## New Mexico

### Fuel Reduction at Fort Stanton Protects Neighbors, Natural and Historic Features

Fort Stanton is located in the Sacramento Mountains in east central New Mexico near Ruidoso. It was established on May 4, 1855 to protect Hispanic settlements along the Rio Bonito River from Apache raids. Home to Kit Carson, John “Black Jack” Pershing, Billy the Kid, and hundreds of Buffalo Soldiers, the fort remained an active part of the Western frontier until it was decommissioned in 1896.

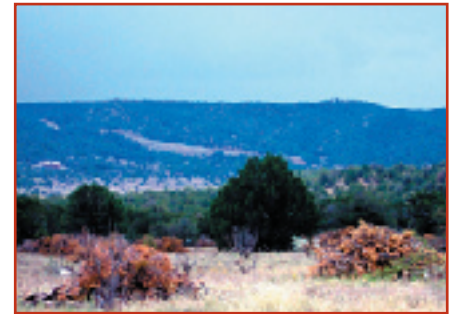
The historic fort is surrounded by BLM’s 24,630 acre Fort Stanton Area of Critical Environmental Concern managed by the Roswell Field Office. Dangerous levels of natural fuels had built up over the years by suppressing all fires. Fuel loads had reached the point that should an ignition occur, catastrophic fire and associated losses



*Project after thinning and burning.*

of property would be expected. In 2001, the Fort Stanton Watershed Improvement Project identified the need to change existing vegetation density and species composition to improve ecological conditions and reduce the presence of fuel hazards.

The Bonito Bench 2 project is one of several fuel reduction projects underway that will reduce the amount of vegetation available to a wildfire, decrease risk of loss to adjacent property, and improve watershed condition. An existing fuel break between Fort Stanton and



*After thinning was complete but burning not yet begun.*

Ranches of Sontera and Rio Bonito subdivisions along the Fort Stanton boundary will be extended.

Ecological health is being monitored with an expectation of improved vigor, competitive ability of native plant community, reduced densities of exotic species, and improved wildlife habitat.

Local support for the projects has been strong. All usable wood is removed and made available to the public as fuel wood, fence posts, and fence stays. Other materials left from cutting is being piled and burned or scattered into arroyos to reduce erosion along banks.

Fort Stanton is an area at high risk of wildland fire. In the shadow of the 66,000 acre Peppin fire earlier this spring, it will remain the target of aggressive fuel reduction activities by BLM to protect its rich natural and historic features while reducing the risks to adjacent landowners.



*Wildland urban interface of the Fort Stanton area.*

# Snapshots 2004

Highlighting BLM projects that support the National Fire Plan.



September 24

## Salt Cedar and Russian Olive Projects Improve Riparian Zones

The widespread invasion of exotic species, particularly salt cedar and Russian olive, into riparian zones throughout New Mexico is well documented. They produce a huge negative effect on native species and critical water resources of the state.

These invasive species are tough and well adapted to their adopted environment. BLM's Roswell fuels staff has taken an aggressive stand on such species through the hazardous fuels program. Numerous eradication and extraction projects have been implemented, including varying treatments on the Pecos River, at the Overflow Wetlands Area of Critical Environmental Concern near Roswell, and on private property in the wildland urban interface zone near Lincoln.



*The excavator used along the Pecos River, center of picture, is dwarfed by hundreds of acres of the exotic vegetation.*



*A grapple rake attached to a loader was the extraction method used at the Overflow Wetlands Area of Critical Environmental Concern.*

The Wooten-Cooper-Smith project is approximately 800 acres along the Pecos River. It was initiated to improve riparian health and watershed conditions and to enhance wildlife habitat by removing salt cedar and Russian olive. Native cottonwoods, willows, and other native species are being protected. A 23-ton Komatsu excavator with a special bucket attachment is being used to physically remove the plants.

At the Overflow Wetlands Area of Critical Environmental Concern, salt cedar was cut, and mechanically piled with a grapple rake attached to a loader. The piles were burned and area seeded to reduce the re-establishment of invasive species.

In another effort to reduce the occurrence of salt cedar on or near public lands a Memorandum of Understanding to treat salt cedar on private land adjacent to BLM lands was signed with the Lincoln County Historical District and local residents. In the resulting project approximately ten acres of salt cedar plants were

cut to about eight inches height, piled and burned. Stumps left in place were chemically treated to eliminate re sprouting. This method of eradication, while time and labor intensive, has proven to be successful. The project is appreciated by the local community and there has been a noticeable increase in the flow of the creek since completion.

The Roswell Field Office's efforts to the treat salt cedar and other invasive plants in its riparian areas is improving the overall health of public lands by providing specific benefits for wildlife, native plants, water resources, and fire mitigation efforts.

*Contact: Allen Wyngaert, Roswell Fuels Specialist, 505/627-0313*



*Before and after removal of salt cedar. Note the telephone pole on left side of both images and the native trees that were protected.*



# Snapshots 2004

Highlighting BLM projects that support the National Fire Plan.



September 24

## Utah

### BLM and Residents Work in Rush Valley

People in the town of Rush Valley will tell you that years ago there wasn't much juniper woodland in their area, but over time, juniper encroached into the Clover Creek Watershed.

In 1997, residents completed a watershed planning process for Clover Creek Watershed along with the Natural Resources Conservation Service, Tooele County, State of Utah, BLM, U.S. Forest Service, and other agencies to address impacts to the watershed, including juniper encroachment. Since then, several property owners have participated in hazardous fuels reduction and prescribed fires conducted by the State of Utah on private lands. The objective has been to protect and restore the watershed.

Residents are accustomed to fire. A patchwork of fire scars cover the hillsides and lie within the valley. Rush Valley has an active volunteer fire department which frequently cooperates with BLM on fire



Rush Valley, Utah is an older community nestled in decadent juniper and sagebrush.



Some homes are in the path of danger because of fuel build up.

suppression and prevention.

In April 2004, residents met at the Rush Valley Town Hall with BLM, State of Utah, and Tooele County representatives to hear about plans to reduce hazardous fuels on public lands near the community. Another topic on the agenda was a discussion to begin coordinating a fire plan for the valley.

BLM's Salt Lake Field Office will work the next two years reducing hazardous fuels on over 1,100 acres south of the community. Over the next five years, mechanical treatments are planned for hundreds more acres. In the first phase, a contractor will conduct aerial seeding operations on the project prior to a second contractor using an environmental brush cutter, or bullhog, to mulch the dense juniper in a mosaic pattern. The project design will reduce the possibility of fires reaching the community.

Contact: Teresa Rigby, Fire Mitigation and Education Specialist, Salt Lake Field Office, (801) 977-4344 or [teresa\\_rigby@blm.gov](mailto:teresa_rigby@blm.gov)

### Cedar City Partners Have Busy Season

In June this year, Cedar City BLM's Division of Fire and Aviation along with its Color Country Fire Management partners received the prestigious Pulaski Award for its outstanding interagency approach to managing wildfire in southern Utah and northern Arizona. As demonstrated by this year's fire season, the multi-agency partnership has proven to be successful and cost effective in fire suppression while enhancing both firefighter and public safety. Partners are BLM, U.S. Forest Service, National Park Service, Utah Forestry, Fire and State Lands, and Bureau of Indian Affairs,.

During 2004, BLM had an extremely busy fire season with over 720 fires reported within the Color Country Fire Management Area. Cedar City BLM fire crews responded to nearly 300 fires, well above the twelve year average of 109 fires on BLM lands within the Southern Utah Support Area.

Adding to the complexity were many lightning ignited fires crossing



The Dammeron Fire grew to over 3,400 acres in June and was one of several wildfires that threatened communities in southwest Utah this summer. This fire was located two miles east of Dammeron Valley.

# Snapshots 2004

Highlighting BLM projects that support the National Fire Plan.



September 24



*Bitterbrush planted through the Utah Division of Wildlife Resources Dedicated Hunter Program in the Parowan Front Fuels Reduction Project. The program has helped to improve big game habitat within in several fuels projects in the area.*

jurisdictional lines. Many were within the wildland urban interface, forcing the evacuations of residents. No structures were lost, but over 23,000 acres of BLM land were blackened as a result of fire activity.

Many large fires occurred adjacent to communities actively participating in the National Fire Plan. The Dixie Regional Fire Council, a community fire council for Brookside and Central, completed a community fire plan in the fall of 2002. This season two separate wildfires threatened the communities and forced evacuations. With a fuel break in place and evacuation plans written, the communities were well prepared and were able to reap the benefits of a completed fire plan.

Since last October Cedar City BLM staff have actively participated in community fire planning meetings and provided technical advice to 11 additional communities that have recently completed their fire plans.

Along with an active suppression program, the Cedar City BLM fuels management program had a challenging and successful season implementing wildland urban interface

and resource projects throughout southwest Utah. The program's continued success comes from integrating fire management objectives with natural resource objectives and working closely with other federal and state agencies, wildlife, and resource partners.

Over \$155,000 was contributed by partners in 2004 to buy seed and to share in contract labor costs to reduce hazardous fuels. Partners include the Mule Deer Foundation, Sportsmen for Fish and Wildlife, Rocky Mountain Elk Foundation, Natural Resource Conservation Service, and Utah Division of Wildlife. Over 15,000 acres of BLM land was treated in the Southern Utah Support Area, of which 9,659 acres were within the wildland urban interface.

Although the primary objective of each of these fuels projects is to reduce the likelihood of catastrophic wildfire affecting neighboring communities, many are designed to improve wildlife habitat for elk, mule deer, sage grouse, and wild turkey.

An example is the 36,000 acre Greenville Bench Enhancement



*Sand Hollow, part of the Greenville Bench Enhancement Project prior to treatment. This project serves to protect the neighboring communities of Greenville and Beaver from wildfire, while enhancing wildlife habitat and improving rangelands.*

Project. It is a landscape level treatment which provides increased wildfire protection to the neighboring communities of Beaver and Greenville, improves habitat for mule deer and sage grouse, and helps restore rangelands and watershed.

Four other fuels projects are nearing completion or have been completed this year around the communities of Quichapa, Far West, Woolsey Ranch, Parowan, Paragonah, New Castle, and Veyo. Many use a variety of treatment techniques including manual and mechanical thinning, pile burning and prescribed fire. Several of the areas have been reseeded with native and nonnative plants and forbs, and some have been planted with bitterbrush and sagebrush as part of the Utah Division of Wildlife Resources' Dedicated Hunter Program.

2005 will be an equally challenging year with the extensive emergency stabilization and rehabilitation efforts this fall and winter on over 23,000 acres that burned during the summer. BLM's fire and fuels program leaders are hoping to complete several prescribed fires including a 6,000 acre Horse Valley Burn near Circleville



*Sand Hollow, after the "bull hog", a mobile chipper shredder has removed encroaching pinyon and juniper trees. Bitterbrush and sage tublings provided by the Utah Division of Wildlife Resources were planted in the area shortly after.*



# Snapshots 2004

Highlighting BLM projects that support the National Fire Plan.



September 24



*The Woolsey-Vandenburg Fuels Reduction Project was chained in the 1960's. Upon completion, over 900 acres will be treated through manual thinning or the use of a mobile chipper shredder.*

and 5,000 acre South Canyon Burn near Panguitch. Several new hazardous fuel reduction projects near the communities of Alton, Brookside, Panguitch, and Zion Panorama are also planned for the upcoming year.



Contact: Tambi Gustafson, Cedar City BLM (435)865-3013 or see <http://www.colorcountryfire.gov>

*The Woolsey-Vandenburg Project is adjacent to the communities of Woolsey Ranch and Quichapa. Quichapa has an active fire council and identified the need for a fuel break in their community fire plan.*

## Idaho

### Salmon Field Office Project Benefits Williams Lake

Williams Lake, a popular recreation area offering opportunities for boating, camping, fishing and water skiing, is nestled in the mountains about 12 miles south of Salmon in north central Idaho. Williams Lake was formed approximately 6,000 years ago when a landslide, probably triggered by an earthquake, blocked Lake Creek, the primary source of inflow.

The private land around the eastern portion of the lake has been developed and contains a few primary residences and numerous secondary homes, along with a resort with several rental cabins, restaurant and boating facilities.

This scenic recreation area has been identified as a top priority for fuel treatments in Lemhi County.

The purpose of the project is to reduce small, more easily combustible vegetation that would cause a wildfire to spread to the larger trees. These smaller fuels, commonly referred to as "ladder fuels," need to be removed to reduce the intensity of a wildfire and prevent crown fires in this important watershed. According to Jim Tucker, BLM Fire Use Specialist, "This project was identified through a collaborative process involving the fire departments in Lemhi County, the Lemhi County Commissioners, BLM, and the Salmon-Challis National Forest, as well as citizens of Lemhi County and residents of Williams Lake."

Through the efforts of this group, the Lemhi County Assessment and

Mitigation Plan was developed. The plan identifies areas in Lemhi County within the wildland urban interface that may be at risk from wildfires. Priorities for treatment areas were developed using information on historic wildfires started by lightning and the vegetation or fuel types adjacent to interface areas. Williams Lake became a high priority based on this information.

The fuel reduction project will remove small diameter trees around houses adjacent to the Williams Lake subdivision and BLM public lands to reduce hazardous fuels. Goals are to reduce risk to firefighters, general public, and structures in the area should a wildfire occur. By removing the smaller diameter trees, the larger remaining trees will have less competition for nutrients and water.

Due to the close proximity of structures, steepness of slope and fuel types, the working group looked at various options to reduce fuels. The group agreed to complete the project in phases. Phase One of the plan is currently being implemented to reduce fuels on approximately 100 acres of timbered ground using a large piece of equipment known as a "Slash Buster." It has a circular cutting wheel on the swing-arm front end which can



*BLM and the contractor discuss the use of the equipment used to cut the small trees and brush.*

# Snapshots 2004

Highlighting BLM projects that support the National Fire Plan.



September 24

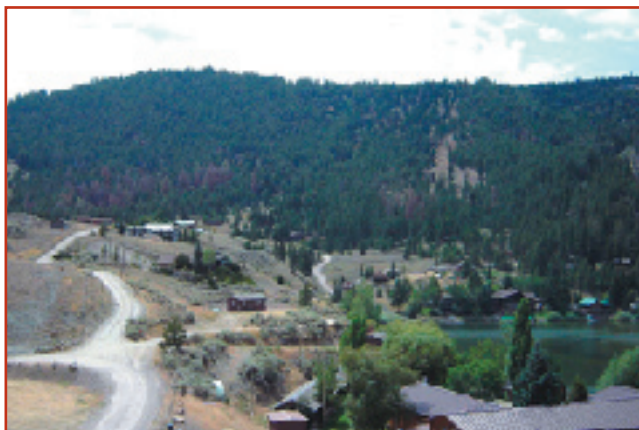


*Williams Lake, surrounded by steep forested hills and interspersed with primary and secondary home sites is receiving treatments to reduce hazardous fuels.*

be guided to the small diameter trees and brush to be removed. The remaining debris is widely scattered as the equipment moves across the terrain. Removal of the small trees and brush will reduce fuel ladders in the area. This will help keep wildfire low to the ground and prevent spreading into the larger more mature trees.

On steeper slopes, crews will use chainsaws to thin trees to be piled and burned during winter when snow is present. These treatments are designed to eliminate potential threat of fire creeping out of the treated unit. Based on current budgets and planning, this project should be completed by 2007.

Contact: Jim Tucker; 208-756-5490



*On the eastern edge of the lake, many residences as well as the resort will benefit from the fuel reduction project.*

## BLM Specialists Publish Spatial Analysis Article in Association of American Geographers 100<sup>th</sup> Anniversary Volume

Geographic Information Systems and fire and fuels specialists in Idaho BLM's Upper Snake River District were recently honored by having their article, "Spatial Analysis of Hazardous Fuels and Ecological Decadence," published in the 100<sup>th</sup> Anniversary Volume of the Association of American Geographers *WorldMinds: Geographical Perspectives on 100 Problems*.

The article was authored by Denise Tolness, Fire-Fuels Geographic Information System Specialist, Brandon Brown, Fire Use Specialist, and Glen Burkhardt, Fire-Fuels Specialist. It describes how to use geographic information system technologies to identify and prioritize where to apply prescribed fire and other fuels treatments on the landscape to reduce hazardous fuels and improve ecological conditions. It details the fuels work that is occurring on 3.3 million acres of BLM lands in south central Idaho.

Since 1994, and more specifically since the severe fire season of 2000 and the implementation of the National Fire Plan, south central Idaho BLM has built one of the most aggressive fuels programs in the Bureau, treating over 148,000 acres in 2003. A large part of this success is due to

the teamwork of fuels and geographic information system specialists using satellite imagery to develop large fuels treatment and monitoring projects. The *WorldMinds* article explains the amount of time and effort used to set up and maintain the geographic information system portion of the fuels program. It also describes how data are modeled to rank areas by ecological decadence and hazardous fuels levels.

Nearly all of the communities in south central Idaho fall within the parameters of a community at risk or wildland urban interface area. Through the geographical technology used by the south central fuels program, areas with the highest fuels buildup can be targeted for treatment and first response. The



*Cover of 100th Anniversary Volume of WorldMinds: Geographical Perspectives on 100 Problems.*



# Snapshots 2004

Highlighting BLM projects that support the National Fire Plan.



September 24

article explains how multiple treatments are generally performed, with surveying completed through the summer, prescribed fire in the spring, chemical application in the fall, seeding through the winter and continual monitoring efforts in the years following completion.

Through the work detailed in the *WorldMinds* article, a good and current baseline inventory is available for managers to compare effects of pre and post-treatment, along with natural changes and disturbances. Using geographical database software allows for maintenance of massive amounts of data, ultimately resulting in land management tools that, according to the authors, are “easy to use, updateable, modifiable and demonstrate the dynamics of an ever changing landscape.”

The 100<sup>th</sup> Anniversary Volume of *Worldminds* is now on bookshelves around the world and is required reading in some university curriculum. The *WorldMinds* article can be accessed on-line at: <http://www.fire.blm.gov/textdocuments/SPHFED.pdf>



*Idaho is using GIS technology to identify sites such as this one to treat hazardous fuels.*



*BLM crews begin prescribed fire operations to reduce hazardous fuels in South Central Idaho.*