

Snapshots

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Successful BLM Projects
Supporting the National Fire Plan

Utah

Salt Lake Field Office Partners for Wildland Fire

BLM's Salt Lake Field Office fuels program shares common goals with other agencies and organizations within Utah to enhance personal safety and reduce loss of life while preserving and improving rangeland health.

"The importance of working with state wildlife agencies cannot be over-emphasized," BLM Director Kathleen Clarke recently noted.

Utah's Division of Wildlife Resources central region joined Salt Lake field office fuels staff on a field trip to Skull Valley in December. Objectives from each agency's perspective were identified for a proposed wildland urban interface project. Wildlife biologists



BLM wildland urban interface coordinator Dan Washington discusses plans with biologists from Utah's Division of Wildlife Resources.

were enthusiastic about results of recent juniper thinning in the area. By the end of the field trip the wildlife resources central region habitat manager and wildlife biologists agreed on the importance of fuel reduction and expressed interest in assisting in the development of the Iosepa wildland urban interface project.

Plans include involving additional partners as this dynamic fuels program

plan grows. Prospective partners include the local landowners and land users who will be encouraged to mitigate fire hazards on private property surrounding public land to enhance fuels projects. Staff members are exploring the possibility of grant money to assist with the purchase of seed, and requesting volunteers from local scouting groups to help spread the seed.

If you are interested in learning more about fuels projects happening around Utah visit www.utahfireinfo.gov.

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New Harmony Benefits through Interagency Cooperation

In southwest Utah, the rapidly growing community of New Harmony has expanded along boundaries of Dixie National Forest, Bureau of Land Management, and Zion National Park. Many homes and subdivisions border the heavily vegetated foothills of the Pine Valley Mountains. Recently, large wildland fires like the 8,100 acre Sequoia Fire in 2002 and 493 acre Harmon Creek Fire in 2000 burned around New Harmony and several of the outlying subdivisions. Numerous smaller fires have also impacted the community.

Recognizing the need to take action, the Color Country Interagency Fuels Committee identified New Harmony as one of six interagency focus areas in 2001. Since that time an interagency effort has been made to reduce hazardous fuels on public lands surrounding the community and work with local residents in developing a community fire plan and educate homeowners about defensible space.

In summer of 2002 as the Sequoia Fire threatened the community of New Harmony, fire crews constructed a 50 foot wide fuel break on Forest Service land while officials worked with the local fire department to create trigger points and evacuation plans. Fortunately, the weather changed, and the fuel break was never tested. The contacts made with the community and fire line preparations completed during the fire later provided the basis for the community fire plan completed by the New Harmony Fire Council in 2004 with the help of the Utah Division of Forestry, Fire, and State Lands, Dixie National Forest, and Bureau



Fire mitigation efforts including thinning thick, decadent junipers surrounding the town of Iosepa, Utah.



This spring, Cedar City BLM plans to use prescribed fire on about 1,200 hand cut acres of the Ash Creek Project.

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of Land Management. By the end of 2002, as the smoke from the Sequoia Fire finally disappeared, BLM had completed the first phase of the 1,500 acre Ash Creek Fuels Reduction Project. The project is located a few miles to the east of the fire and along the southern edge of New Harmony and the Black Ridge Ranches. The mosaic pattern of treatments was designed by BLM's St. George resource staff and Cedar City fuels program specialists to reduce the threat of wildfire to homeowners and restore ecosystem health. During the 1960s, the project area had been chained to stimulate forage production for big game and livestock. Since then pinyon and Utah juniper trees have returned to dominate the site and choked out many native species including stands of bitterbrush, cliffrose, live

oak, and other desirable wildlife forage. The final phase of the project will be completed this spring using prescribed fire to further reduce the hazardous fuels. The fire effects staff from the Rocky Mountain Research Station in Missoula, Montana has been monitoring the implementation of the Ash Creek project in order to verify vegetation maps created using satellite imagery. This was done as part of the Southern Utah Fuels Management Project to develop fuel models for juniper communities and gather information for computer-modeling programs such as FARSITE and FLAMMAP. The goal is to develop models which may help predict large fire behavior on actual landscapes. Planning was initiated in 2003 to extend and expand



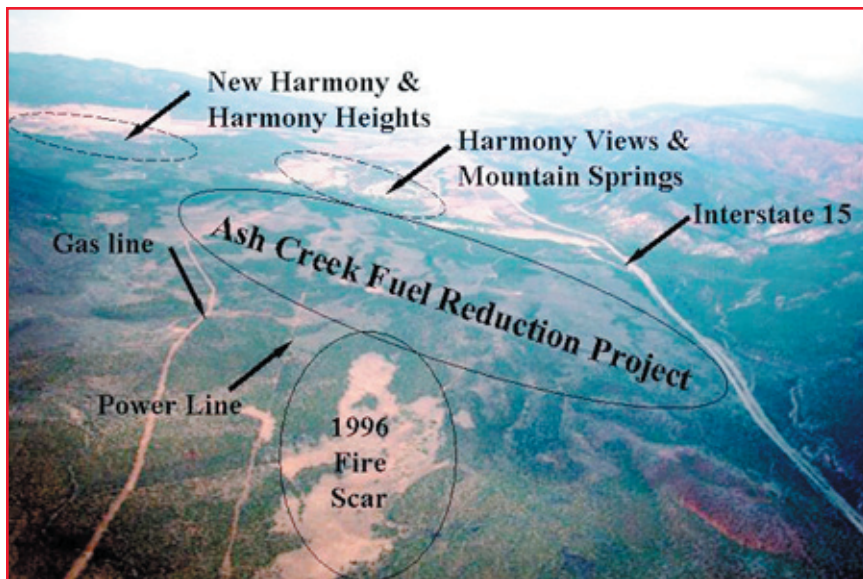
During the Sequoia Fire of 2002 crews cleared a 50 foot wide fire break. The Dixie National Forest has since done enhancement, widening it to 240 feet and covering nearly five miles around the community of New Harmony.

the fuel break on the Dixie National Forest started during the 2002 Sequoia fire. Expansion would strengthen the existing fuel break and link it to the Ash Creek Project on BLM lands. The fuel break stretches nearly five miles through thick mountain brush, pinyon and juniper. Under the newly released Healthy Forest Initiative categorical exclusion, the Dixie National Forest began the streamlined planning process. Not only was Dixie the first National Forest to use such an approach in the intermountain west, they were also the first in the region to

use the BLM's Indefinite Delivery Indefinite Quantity contract.

By March 2004, a 20-person contract crew started the cutting and piling and finished 110 acres of the 240 foot wide fuel break in 11 days. Last fall, in an interagency effort, local crews from the Forest Service, BLM, and Utah Division of Forestry, Fire, and State Lands joined forces, and over three days burned approximately 9,000 debris piles within the project area.

Across the interstate highway from New Harmony, Zion National Park has also completed a hazardous fuel reduction project for the purpose of protecting the Kolob Visitor Center and surrounding private structures in the event of wildfire. Zion's fire management personnel treated 52 acres of park land



The mosaic patterns of treatments in BLM's Ashcreek Project aim to reduce the threat of wildfire to neighboring communities while providing improved forage conditions for wildlife and livestock.

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Zion National Park has thinned pinyon and juniper trees surrounding the Kolob Visitor Center.

in the vicinity of the visitor center by thinning and hand piling trees and brush to create a zone of defensible space around structures and along the park boundary. Burning piles took place during favorable moist weather conditions reduced chance of the fires escaping. Not only does the park service fuel break provide protection to infrastructure, it will also reduce threat of wildfire moving from public lands along the interstate to the private residences that are less than a mile north of the project area.

With three federal agencies implementing fuel breaks in the area, New Harmony has fuel treatments on the east, west, and south sides of the community. Plans are underway for BLM and U.S. Forest Service to extend treatments to the north and to maintain current fuel breaks using prescribed fire, mechanical treatments, and

even domestic goats to clear the brush. Private lands have not been left out of the equation. Utah's Division of Forestry, Fire, and State Lands continues to work with the New Harmony Fire Council and private homeowners in the area to create defensible space around homes. Since the National Fire Plan grant monies were awarded to the community last fall, fuels mitigation on over 20 properties in the New Harmony area have been completed. With the help of the New Harmony Volunteer Fire Department, the state has been able to burn several large debris piles in town. State fire management personnel have also started inventory work on all residences in the area utilizing the RedZone software to develop a pre-attack plan and to determine which areas need further work based on fire risk and subdivision risk.

The New Harmony project area is just one example of how the Color Country Interagency Fire Management Team is working with communities in southwest Utah to protect them from the risk of wildfire. For more information on these projects and others in Color Country, please visit our website www.colorcountryfire.gov.

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California

North Fork Rancheria Creates Jobs and Fire Safe Communities with BLM Grant

The California Fire Safe Council passed through a 2004 Bureau of Land Management grant of \$75,000 to North Fork Rancheria that had a double benefit of reducing wildfire fuel and unemployment.

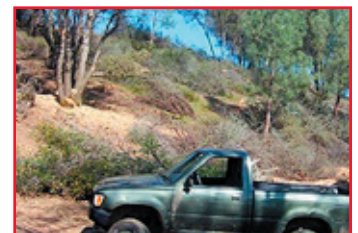
North Fork Rancheria, part of the Indian Housing Authority, is in Madera

County near Bass Lake, a popular recreational area, and not far from Yosemite National Park.

The Rancheria's Wildfire Prevention Tribal Fuel Reduction Project reduced the 40 percent tribal unemployment rate because the Rancheria hired local members to do brush clearance. Although the jobs were temporary, the tribe members received training in fuel reduction that they can potentially use in other employment.

The project was a cooperative effort where tribal members worked with Indian Housing Authority personnel, Forest Service Bass Lake Ranger District, Sierra Mono Museum and the Eastern Madera Fire Safe Council to remove fuel on 40 acres of tribal lands and protect 90 people and 14 homes valued at \$1.5 million.

For every federal dollar funded through this grant, \$20 worth of property was protected. This translates to a return on investment of 20:1.



Before and after at Wah Up Weh Tu. Sometimes too dense to penetrate, heavy vegetation surrounds North Fork and nearby communities. Fire carries rapidly through this vegetation, which is primarily manzanita and ponderosa pine.

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The project began in 2002 with initial public education, the development of a fuels management plan, and a chipping project. Outreach to other local organizations produced crucial information on fire control, endangered species, fuels management, soil erosion and water issues. The 2004 project continued public education and provided for fuel reduction efforts.

Contact: Brenda Rightmyer, California Fire Safe Council Sierra Region Grant Manager, (800) 257-7066

Making a Fire Safe Community One House, One Homeowner, One Acre at a Time

The Orleans-Somes Bar Fire Safe Council is one step closer to achieving its goal of having a fire safe community, thanks to a 2004 Community Assistance grant from the Bureau of Land Management through the California Fire Safe Council.

Under this grant, the council coordinated with Orleans and Somes Bar homeowners to thin flammable vegetation on 15 acres around



Orleans and Somes Bar in northern California are home to rugged individualists who have banded together under the fire safe council to improve their communities' fire safety.

homes in high fire risk neighborhoods. The project engaged homeowners in the stewardship of their properties by getting them to burn the piles created by the fuels reduction crew. In addition, landowners volunteered time to make a personal fire plan for their property in the event of a catastrophic fire.

The grant also enabled the fire safe council to prolong the work season for hired fuels reduction crews. It provided jobs for 15 crew members.

Orleans and Somes Bar are part of the lower mid Klamath sub basin's five percent predominantly small private inholdings within National Forest and federal wilderness lands. Fire fuel densities are among the highest in the state with dense fuels resulting from 80 years of effective fire suppression and now encroaching on homes, water systems, and ingress and egress routes.

Contact: California Fire Safe Council Coast Region Grants Manager, Amber Gardner, (800) 372-2350

Nevada

Laser Technology at Work in Winnemucca

Winnemucca Field Office specialists are using innovative laser technology to monitor treatment performance in burned areas that have been reseeded. Since spring 2004, the emergency stabilization and rehabilitation program monitoring team has been working with the field office's fuels management program staff on new laser sampling equipment designed to improve monitoring coverage and to provide useful data.

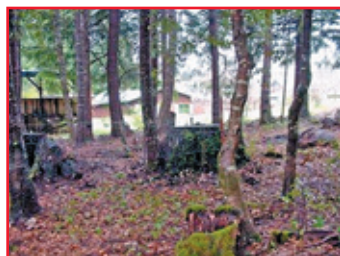
"After the big fire seasons of 1999-2001, we were looking for ways to improve our monitoring coverage of emergency stabilization and rehabilitation projects in burned areas," said Rob Burton, monitoring

coordinator for the field office. "However, the prospects were pretty daunting when we considered how many acres we'd be addressing with our limited resources.

"We wanted to get a sense of changes in the vegetation community, as well as a better understanding of the invasion of such fine fuels as cheatgrass, so we could assess the condition of these landscapes."

Ordinarily, a range or fuels specialist would monitor a plot of land by pounding two stakes into the ground at set intervals, tightly stretch a tape between the stakes, creating a transect. The specialist would walk the length of the transect line stopping at set intervals to place a one meter metal hoop on the ground to measure the density of vegetation. Measuring basal or ground cover, probably the most important index of re-vegetation success, would commonly be read along the taped transect. These transects would be read every year for two to three years to evaluate for vegetation trends since seeding.

This traditional method of walking the land and measuring with a metal hoop and steel tape has worked well on small monitoring plots in burned areas, but not so well for large emergency stabilization and rehabilitation treatment areas.



Before and after photos of vegetation around a typical home in the community.

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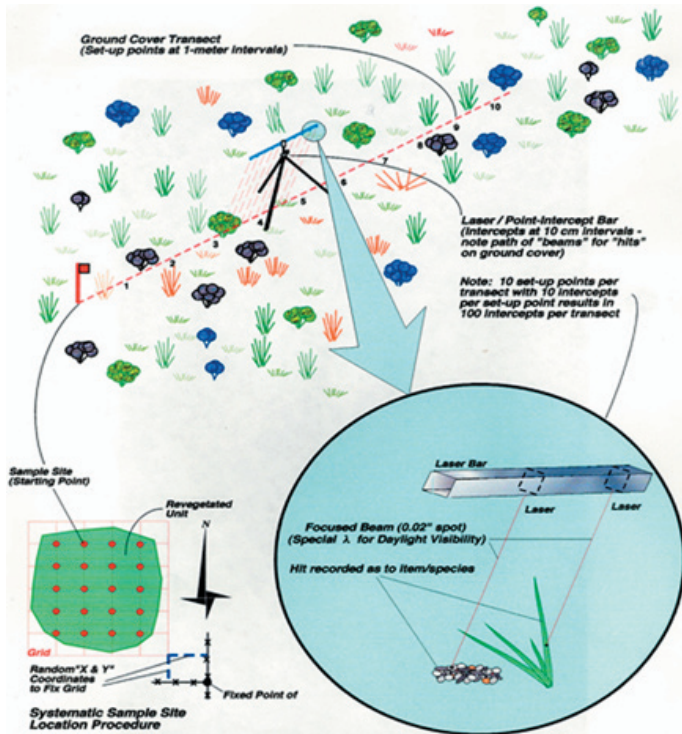


Figure 1

Sampling Procedure at a Systematic Sample Site Location

Transect location and monitoring criteria developed for use with mine rehabilitation plots.

Staff members researched various options for improving monitoring results on large treatment areas, and learned about laser technology being used by Steven Viert, a Colorado consultant with Cedar Creek Associates, Inc. The contractor had been using the Laser Point Bar as a tool to measure vegetation density at mining restoration sites.

In spring 2004, Winnemucca staff took the laser bar to established monitoring sites to evaluate the technology in an area with established results. This enabled field staffers to calibrate the accuracy of the laser bar against the results of manual vegetation density

measurements. The end result was a seamless flow of monitoring data from existing emergency stabilization and rehabilitation monitoring sites.

In order to select random sample sites for monitoring with the laser bar, field office staff relied on a grid system based on mine reclamation site monitoring methods.

Since the composition of the various landscapes was similar, specialists used geographic information systems software to sort each treatment area by vegetation type, soil type or any other critical ground coverage. The laser bar

created random points to anchor laser projections, then develop random monitoring points.

Winnemucca specialists used geographic information systems software to sort each treatment area by vegetation type, soil type or any other critical ground coverage. They subsequently created random points from which to anchor their laser bar monitoring studies.

Specialists used global positioning system technology to locate these random points in treatment areas. Transects were placed on lines radiating from anchor points, which followed randomly chosen compass directions. Transect samples included ten sub-samples, taken at one-meter intervals, over a ten-meter area. The end result was 100 sub-samples per transect or sample. Each sub-sample covered a spot of ground containing ten projected points of light from the laser bar.

Specialists spaced transect lines at 30 meter intervals on the small treatment areas, and 100 meters on large treatment areas, with each transect following along the monitoring line.

The laser bar projects onto the ground ten evenly spaced 0.05 millimeter points of light. Whether the point of light hits plants, bare ground, litter, or anything else, the resulting data is recorded on a monitoring sheet. The laser-generated data shows vegetation density and frequency, and also indicates the percentage of ground cover for the selected landscape.

Burton estimated that the laser bar might allow field specialists to gather roughly ten times the number of samples per transect than traditional manual methods, decrease field time to gather data and increase accuracy by increasing precision. The precision of the laser bar “hits” should also reduce the possibility of operator error



Calibrating the laser point intercept to documented monitoring sites.

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that sometimes results from existing manual monitoring methods.

“This would allow us to monitor more transects per site and give us greater coverage of emergency stabilization and rehabilitation project areas,” Burton said. “The result would be greater efficiency and higher overall confidence in our data analysis.

“This larger scale of coverage would allow us to view fire rehabilitation treatments, and especially post-treatment results, on a landscape scale.”

BLM Utah’s emergency stabilization and rehabilitation specialists learned of the tool and decided to incorporate the same laser technology into their monitoring efforts on the Rattlesnake Fire burned area near Moab. They are also checking and calibrating their results statistically.

Winnemucca staff has been keeping in touch with their Utah counterparts, and visited Moab last September to compare results.

Dave Vickery, editor

Sheri Ascherfeld, graphics and layout