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California

Fuels Management Program Helps Prevent Potentially Catastrophic Wildfire

Public land within much of BLM's Ukiah Field Office is characteristic of the California interior coastal mountain range. The terrain is steep and mountainous with elevations varying from 1,000 to 4,500 feet. California chaparral is found throughout the area and is one of the most fire susceptible vegetative types in the world.



The 2001 arson fire scar can be seen at the center of this photo. Note the handline above the fire area that contained the fire. The larger dozer line was put in as a precaution that wasn't needed thanks to the reduced fuels.

In the summer of 1960, an arson fire was set in the Mill Creek drainage adjacent to the public lands of Cow Mountain. Thousands of acres were burned. After twenty years, the vegetation had regrown and local stakeholders began voicing concerns that the volatile conditions were ripe again for another catastrophic fire. BLM worked cooperatively with these stakeholders to establish and prioritize fuels management units within the 60,000 acre Cow Mountain Recreation Area, including a prescribed burn plan scheduled for implementation in the fall of 1981.

However, in August of 1981, an arsonist set another fire in the Mill Creek drainage. With summer temperatures exceeding 100 degrees, the fire raced over the same path it took in 1960. By the time the fire was contained, over 26,000 acres had burned, including 35 structures, a number of which were residential homes. The fire suppression and rehabilitation costs exceeded \$2 million.

Fuel reduction efforts were continued with lessons learned from these two arson fires. By the mid 1990's, not only had the chaparral regrown in the previous fire scar but also there had been a substantial increase in residential development along the wildland urban interface. In the fall of 1997, BLM and the California Department of Forestry and Fire

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Protection (CDF) cooperatively implemented a prescribed burn within the Mill Creek drainage. The primary objective for doing the burn was to break up the continuity of the maturing chaparral. Should another fire then occur, the fuel loadings would be such that the fire could be readily suppressed before it had the chance to become another major inferno.

In July of 2001, an arsonist once again set a fire within the same drainage. Air temperatures again exceeded 100 degree Fahrenheit. Other similarities to the two previous fires included approximately 20 years of vegetation regrowth, fire location, fire weather, and availability of CDF initial attack resources. One extremely noteworthy change to the area was the reduced fuel loading brought about by the 1997 prescribed burn. As CDF responded to the fire, it became apparent that the outcome would also be significantly different from that experienced in 1960 and 1981. Fewer fuels on the landscape meant substantially less fire intensity and rate of spread of the wildfire. The wildfire was controlled at less than 10 acres. The end result was a considerable savings in terms of potential damage to public and private resources as well as fire suppression and rehabilitation costs.

The benefit of the fuels reduction work completed in the area prior to the fire cannot be underestimated. Minimal resources were needed to control the blaze, little or no rehabilitation was required, and no homes or lives were lost. Although there is still more to do in order to reduce the fire hazard on public land within the Ukiah Field Office, private, county and state cooperators continue to be very supportive of the fuel management program.

Contact: Jim Dawson, Fire Management Officer, BLM Ukiah Field Office, (707) 468-4079

Rare Plant Ecosystem To Benefit From Prescribed Fire

Ash Valley, located in Northwestern California near the town of Madeline, has been designated an Area of Critical Environmental Concern, in part due to the rare plants that grow only there. In an effort to maintain this ecosystem in a healthy condition, fire is being re-introduced.

BLM's Alturas Field Office fire management and range conservation staffs are working together to on the Ash Valley Prescribed Burn Project to accomplish maintenance goals. These are reduction of hazardous



One of the sensitive species of the Ash Valley area, *Astragalus anxius*.

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and overgrown fuels in the area to improve the habitat, and to conduct research on the affects of planned low intensity underburns on the rare plants.

The project began in July 2002, with study plots and transects being established to examine conditions prior to the prescribed burns. These same plots will be studied again immediately following the burns as well as in the months and years that follow. BLM's range conservationist and lead researcher, Mike Dolan, hopes to publish the results and enter them into the Fire Effects Information System so that others can benefit from the research being conducted.



Ivesia: Ivesia paniculata grows only in the Ash Valley area and is one of five rare plants to be studied during this project.



Crews are trimming ladder fuels in preparation for the upcoming prescribed burn.

The burn plan is expected to be in prescription this fall. It is intended to reduce fuel loading and stimulate forbs production by consuming the brush and duff in the sagebrush/juniper/ Jeffrey pine ecosystem. The burn will be done by the Alturas prescribed fire/fuels module and will cover approximately 20 acres.

Contact: Jerry Wheeler, Acting Fire Management Officer, Alturas Field Office, (530) 233-4666

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Goats were used for maintenance along 3 miles of the Mule Town Fuel Break.

Four-Legged Fuels Force

Creation of fuel breaks is a common method used to slow or stop wildland fires. Five years ago the Mule Town fuel break was completed near Igo, California in an effort to protect the community.

Fuel breaks are as dynamic as the wildlands they're cut into – they require maintenance in order to remain effective. In five years, considerable brush and tree sprouts had begun to re-vegetate the Mule Town fire

break, compromising its original effectiveness. BLM's Redding Field Office began considering various maintenance options including use of herbicides and burning. The risks and negative side effects of these methods led to another option – a herd of hungry goats!

In May 2002, 650 goats were contracted to eat their way through 40 acres of regrowth spread along 3 miles of fuel break. They ate the fine fuels such as grass, dead pine needles and leaves as well as the larger re-sprouting vegetation like manzanita, small trees, and blackberry bushes. They even ate poison oak and non-native noxious weeds such as star thistle. They also consumed the lower limbs of larger trees, reducing ladder fuels and mimicking the effects of fire pruning.

The use of goats for this maintenance effort was a total success. The fuel break has been re-thinned with little or no risks associated with burning. There were no worries about smoke, fire escape, patrolling, ordering resources, weather, air quality, lengthy burn planning process, or the potential of killing residual trees within the fuel break.



The goats clearing efforts are nearly complete.

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Goats have proven their ability on this project. As a result, its expected that the goats will return for use on adjacent fuel breaks next year!

Contact: Walter Herzog, Fire Management Officer, Redding Field Office, (530) 224-2124

Goats eating their way through toyon bushes.

Cooperation & Coordination Leading to a Safer Community

BLM's Surprise Field Office Fire staff is assisting in an on-going cooperative wildland-urban interface project to construct and maintain a series of fuel breaks on the Fort Bidwell Indian Reservation above the town of Fort Bidwell in extreme northeastern California near the Oregon and Nevada border. It is home to approximately 300 people.

Heavy fuels that surround the community culminated in a partnership between the BLM, the tribe, and the Bureau of Indian Affairs. Creation of fuel breaks and buffers between the wildlands and the community has been a long-time goal of the partnership. The 100 to 150 foot wide fuel breaks will help slow or stop an approaching wildfire and provide a defensible space and anchor points



Heavy fuels to the right, fuel break in the middle, property to be protected to the left of the photo.

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for suppression crews in the event of a wildfire. BLM provides direct protection and suppression resources to this area and expects that pre-fire mitigation projects such as this fuel break will help protect the community and the surrounding public lands from wildfire.

During the summer of 2002, the BLM fuels module is assisting the BIA crews maintain the existing fuel break on the eastern side of the community while also constructing as new fuel break on the south boundary.

Contact: Garth Jeffers, Fire Management Officer, Surprise Field Office, (530) 279-2729



A section of fuel break climbs the hill around the community of Ft. Bidwell.



Section of fuel break before maintenance project. Fuels crew about to begin clearing of the fine fuels that could carry a wildfire.



Section of fuel break after maintenance project.

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Arizona

Cooperative Efforts Succeed for Arizona Community Threatened by Wildfire

Pre-planning and cooperative work paid off when the Hualapai Mountains outside of Kingman, Arizona were pounded with dry lightning and high winds July 11 to 13, 2002. About a dozen fires were reported keeping BLM fire crews busy locating fires and assessing their potential. By July 14th, two fires were over 50 acres each and one had grown to 200 acres.

BLM and Forest Service crews had worked long hours actively fighting these fires. There were also smaller fires not yet staffed that needed to be watched. The weather forecast also predicted more dry lightning over the next several days. In addition, two Hualapai Mountain communities, Pine Lake and Pinion Pine, were potentially threatened from the fires. The Wild Cow Fire, at 200 acres was within one mile of Pine Lake. The fire had the potential to burn into the community due to fire location, current weather conditions and the extreme fire behavior being exhibited. This combination of factors led to the decision to group the fires together, call it the Peak Complex and order an Interagency Incident Management Team.

Fortunately, this type of event had been anticipated by the BLM, Pine Lake Community and other stake holders in the area and advance planning efforts were put into action.

In January of 2001, the BLM offered assistance to Pine Lake for wildland fire urban interface issues. From an initial meeting the "Pine Lake Working Group" was created. The group consisted of the BLM Kingman Field Office, Pine Lake Fire Department, Hualapai Mountain Home Owners Association, Mohave Counties "Hualapai Mountain Park", Arizona State Land Department and interested residents. Projects and priorities were established and work began to make Pine Lake a safer place from wildfire.

One of the projects was to coordinate wildfire pre-suppression efforts with the working group members as well as Mohave Emergency Management Services staff members and the Mohave County Sheriffs Department. Meetings were held prior to the 2002 fire season where suppression tactics and strategies, evacuation procedures, communication links and staging areas were established by all attending members.



The Wild Cow fire posed a significant threat to the community.

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This cooperative effort and pre-planning paid off. Communication with the Pine Lake Fire Chief, Tony Beacom, was established immediately after the fires were reported. As the fires grew, other fire suppression and support members were brought in to help. The pre-planned actions were implemented. All of the agencies and involved fire personnel



Heavy air tanker at work putting down retardant on the Wild Cow fire.

performed their duties with coordination, cooperation, communication and with a high level of professionalism. A voluntary evacuation of Pine Lake was requested by the Pine Lake Fire Chief, with over 70% compliance. Fortunately a mandatory evacuation was not necessary. The fire was held at 420 acres due to aggressive but safe fire suppression tactics and strategies by the Kingman BLM fire staff and Forest service crews. It was these cooperative efforts and community pre-planning that made the outcome a success. The communities willingness to work together is a shining example of the team work needed to achieve a common goal.

Contact: Michael Trent, Kingman Field Office (928) 692-4451

Rural Fire Assistance Grants Are Working in Arizona

The small mountain community of Pine Lake near Kingman, Arizona is now equipped with a new fire engine thanks to grant dollars provided by the BLM, Arizona State Land Department and Pine Lake Fire Department. The grants are given to rural communities recognized by the BLM as a community at risk from wildfires. The Pine Lake Fire Department submitted grant proposals to the Arizona State Land Department requesting assistance in acquiring a new fire engine capable of fighting wildfires but also useful in community structure protection. The grant was approved and funds provided to supply the Pine Lake Fire Department with a very effective urban interface fire fighting engine.

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Earl Atkinson of the Pine Lake Fire Department talking with a local reporter about the foam unit on the new engine.

The engine is built on a 10 ton, 6x6 chassis, has a capacity of 1000 gallons and is equipped with a compressed air foam system also known as a “CAFS Unit”. The CAFS Unit triples the effectiveness of the water, and can foam down a house creating an effective barrier from fire brands ahead of an oncoming wildfire. Pre-treating homes with foam is a very effective tactic used to help prevent home loss. Mixing water with the foam concentrate and adding compressed air, creates a thick foam which penetrates wood surfaces raising the moisture content, as well as clinging to the outside of the home. This protective foam layer can last

for hours. A treated house can be left before an advancing wildfire is too intense for firefighter safety, or it allows firefighters to move ahead and pre-treat other homes that may be threatened.

This type of fire fighting engine is a first for the Pine Lake Fire Department. The capabilities of the engine doubled the fire fighting effectiveness of the department and it will allow the fire fighters of Pine Lake to provide better fire protection for their community. The chassis came to the Arizona State Land Department from the US military as excess property. It had less than 30,000 miles on it and was then completely refurbished by the state. The pump and tank package were obtained with funds from BLM’s rural fire grants and the Pine Lake Fire Department. It is this type of cooperative efforts and funding that is making “Rural Fire Assistance Funds” a success in helping to provide better equipment to communities at risk from wildfire throughout the country.



Members of the Pine Lake Fire Department and Arizona State Lands Department with the new wildland-urban interface fire engine.

Contact: Michael Trent, Kingman Field Office (928) 692-4451

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Tucson Field Office, Safford/ Tucson Fire Management Zone

Signs, Signs

Working with Cowbelles, a local range management advocacy group, the Safford/Tucson Fire Management Zone recently placed another fire danger sign at a road intersection within the Las Cienegas National Conservation Area. This custom made steel sign was donated by the Tucson Electric Power Company and should last for many years in this desert grassland. An older wooden fire danger sign made by fire crews years ago will be repainted by Youth Corps crews this summer. The fire management zone also provided funding to help the Cowbelles purchase a half dozen fire management signs that were put up this summer.

Early this summer Tucson's Fire Mitigation Specialist and Park Ranger, set up fire interpretive information at a kiosk on the Las Cienegas National Conservation Area. Working with the



One of the signs built by teamwork of Arizona Cowbells, Tucson Electric Power and BLM.



Youth Corps crew created defensible space around the Empire Ranch headquarters as seen in these before and after photos.



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recreation planner, the kiosk and parking area will be repaired to attract more visitors. Just four miles from the kiosk a fuels hazard reduction project has just been completed by the Youth Corps to protect BLM structures at the Empire Ranch headquarters. This hard working crew was able to improve the defensible space around various building on this historic ranch.

Contact: David Peters, Tucson Field Office, (520) 258-7207

Volunteerism Alive and Well on the Rodeo Chediski Fire

Most of the smoke is out on the 10th largest fire in United States history and rehabilitation crews are busy stabilizing key watersheds impacted by the fire. The first organized volunteer weekend, over 560 volunteer days were logged assisting with rehabilitation of the Rodeo Chediski Fire.

Volunteer crews were bused onto the national forest, where they placed straw mulch on 80 acres of land. The mulch will reduce the impact of rainfall by reducing water runoff and sedimentation from moderately and severely burned soils, as well as acting as a protective layer over the aerielly seeded grass mix. The Burned Area Emergency Rehabilitation team has already seeded 11,000 acres of burned land north of the Mogollon Rim, on the portion of the predominately on the Apache Sitgreaves National Forest. This rehabilitation team plans to treat 34,000 acres of the most severely burned areas of the fire by aerielly seeding barley, annual ryegrass, mountain brome and slender wheatgrass before the end of the monsoon season. The 3" tall barley is already acting as a carpet of protection to stabilize the soils in critical watershed above communities at risk from flooding.



The aftermath of the Rodeo-Chediski Fire for one family.

According to David Peters, Volunteer Coordinator for the Rodeo Chediski Fire Rehabilitation Team, volunteers have participated in several other projects, including filling thousands of sandbags for people living in flood prone areas. There have already been evacuations within critically burned watershed and major debris flows. He said that,

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“together with the county emergency services office, local fire departments, radio stations, the area newspaper, and the county roads department, the word is out regarding the availability of sandbags for homeowners living in floodplains”. The sandbags are being used to mitigate the impacts of potential flooding. Bags are being filled on a weekly basis, but by end of the weekend only a few bags remained at the pickup points along Hwy 260.

Volunteer crews have also helped landowners remove sedimentation and debris from culverts and ditchlines, in order to reduce the likelihood of debris flows caused by breaching of saturated fills. Many of the volunteers believe that the most fulfilling part of the project was helping remove home debris for the people who lost their home to this historic Arizona fire.



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A church youth group in Chandler, Arizona filling sandbags at one of five locations along Highway 260.