

Snapshots 2004

Highlighting BLM projects that support the National Fire Plan.



September 10

Nevada

Fuel Breaks Save Homes and Businesses During Carson City Fire

The worst wildfire ever seen in Nevada's state capital occurred July 14-16 this summer. The Waterfall Fire burned down the eastern slope of the Sierra Nevada Mountains into the western outskirts of Carson City, and consumed 8,700 acres of timber and brush, injured several firefighters and civilians, destroyed 17 homes, one commercial building, and numerous outbuildings. Three fire trucks and several other vehicles were also destroyed by the blaze.

But many other homes and businesses were saved by fuel breaks created by the Carson City Fire Department, the Nevada Division of Forestry and the U.S. Forest Service.

Carson City residents awoke on the morning of Wednesday, July 14, to a



Secretary of the Interior Gale Norton and Nevada Governor Kenny Guinn toured the Waterfall Fire on August 5 shortly before the Governor requested a Presidential Disaster Declaration. They were able to observe the instrumental role of fuel breaks in saving homes.

large smoke plume on the mountains to the west of town. Around 1:30 p.m., the fire exploded in heavy timber and roared downhill, driven by 20 to 30 mile per hour winds out of the west. Fire behavior turned erratic and extreme.

Upscale homes in neighborhoods like Kings Canyon, Ash Canyon and Timberline lay in the fire's path. Many families left homes and spent the night at the Carson City High School, which was turned into an evacuation center. Seventeen families lost their homes and possessions.

The damage could have been much worse if not for work done in 2002 and 2003. The Carson City Fire Department in those years had used grant money from the U.S. Department of Agriculture to create fuel breaks on the western edge of town, near King's Canyon Road. Crews used large shredding machines to grind down the heavy brush in 50 to 100 foot wide fuel breaks in stands of sagebrush and bitterbrush adjacent to residential developments.

Bureau of Land Management crews responded to the Wednesday afternoon fire this year, and were able to use the fuel breaks as safe areas to take a stand against the rapidly advancing flames. As a result, many homes were saved.

Secretary of the Interior Gale Norton and Nevada Governor Kenny Guinn toured the Waterfall Fire site on August 5, shortly before the Governor announced that he had requested a Presidential Disaster Declaration.



Fuel treatment areas at the head of the fire were used by firefighters as access points and positioning to set back fires, which were credited with saving homes. The scorched trees resulted from a fire column that collapsed as a result of the fuel break.

Both the Secretary and the Governor saw firsthand how effectively the fuel breaks protected homes and business during the fire.

Fuel breaks on the west side of Carson City weathered a wide range of wildfire behavior, including a rapidly advancing head fire, flanking fire, and fire behavior associated with a collapsing column. At the height of the fire, BLM wildland firefighters Scott Johnson and Nate Rasner observed that in all cases fuel treatments performed well with no homes lost with fire intensity in the fuel breaks reduced under all conditions. Even in the most extreme fire conditions with a rapidly advancing head fire, fuel breaks provided crews with relatively safe access to areas lying between the homes and the advancing fire. These areas would otherwise have been unsafe to enter. From this position firefighters were able to safely conduct backfiring operations, which undoubtedly saved a number of homes from destruction.

In one location, BLM firefighters witnessed the effects of a collapsing

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column near one of the fuel treatments. The collapsing column blew flames through the fuel break, and scorched trees and shrubbery surrounding the homes, but no structural damage resulted.

During moderate fire behavior such as flanking fire, fuel treatments alone kept fire out of the residential areas and allowed firefighters to deploy to more seriously threatened areas.

Both Johnson and Rasner suggested widening the fuel breaks to 150 feet to better protect homes from extreme fire behavior.

Firefighters found many creative ways to use the fuel breaks, saving homes and increasing the effectiveness of the available suppression resources. The Carson City Fire Department created the fuel breaks on private property, using U.S. Department of Agriculture grant funding under the National Fire Plan.

Carson City Fire Chief Lou Buckley, former Assistant Fire Chief Steve Mihelic and current Assistant Fire Chief Stacey Giomi showed foresight by taking this proactive action, which very likely saved many homes.

The Bureau of Land Management and the U.S. Forest Service have created similar fuel breaks in the Carson City area, as well as elsewhere in Nevada. For example, the Forest Service created fuel breaks adjacent to the Lakeview area on the northwest end of Carson City, which was threatened by the Waterfall Fire. No homes were lost in the Lakeview area.



Development near the foot of Kings Canyon Road. The bike path and common space on the perimeter serves as a fuel break.



BLM firefighters added a narrow scratch line to the outside edge of the fuel treatment, started a back fire, and were quickly able to move on to other threatened areas.



The fire was being pushed by wind parallel to the fuel break in this location. The treated area kept the fire away from homes without firefighter assistance.



In a few areas the existing fuel treatment was augmented by additional dozer lines to secure vulnerable areas.

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Colorado

Sand Table Exercise Serves Many Purposes

The Northwest Colorado Fire Management Unit is an interagency fire program that houses the Craig Interagency Dispatch Center in Craig, Colorado. Cooperators include the Bureau of Land Management, Colorado State Forest Service, U.S. Fish and Wildlife Service, National Park Service, U.S. Forest Service, and Moffat County.

During fire season every year, BLM Fire Mitigation Specialist Lynn Barclay facilitates weekly lunch meetings with Moffat County's Department of Natural Resources, the Moffat County Sheriff's Department which maintains engines and red carded fire officers, Colorado State Forest Service and Craig Fire and Rescue. These meetings offer an opportunity for discussions concerning local wildland fire situations, resource availability, radio communication issues and partnership building.

Large wildland fires in neighboring Routt County during the 2002 fire season required both Type 1 and Type 2 Teams to deal with them. The challenges for communities and state and federal fire managers to communicate and work effectively together were many. The fires in the neighboring jurisdiction caused Craig Fire and Rescue Chief Roy Mason to ask, "How would we handle a large scale wildfire that involved private and federal land and any related



(l to r) Moffat County Under Sheriff Jerry Hoberg, commissioner Darryl Steele, deputy Mike Anthony, and county fire officer Tim Jantz listen as BLM one fire management officer Dale Skidmore explains the table top exercise.

parameters of the exercise were set with input from all participants. For training purposes they established a scenario with fire starting on private land and the county taking the lead rather than the Northwest Colorado Fire Unit. They also chose an area that had been identified as a high risk area for wildland fire located about two hours away from emergency responders. BLM constructed a sand table and made a field trip to document the number and locations of structures. Assistant Fire Management Officer Cliff Hutton had recently attended sand table training and directed the operational aspect of the scenario.

Exercise objectives were to test coordination and response capabilities to fire in a populated area, test evacuation coordination and ability, test understanding of incident command with emphasis on transfer of command and unified command,

accidents, who's responsible for what?"

Discussions and meetings were initiated to develop a tabletop exercise to address the concern. Another dimension was added with the idea of using a sand table to conduct the exercise. The

test multi-agency coordination and communication capabilities, challenge participants with problem solving exercises, identify private land ownership and livestock issues and discuss mitigation measures, and practice Public Information Officer and Joint Information capabilities.

Moffat County Commissioners were asked to attend since they would have decision making responsibilities regarding expenditures and would have a role to play. Invitations were sent to cooperating agencies as well.

It was staged as a typical duty day for participants. Interagency Dispatch was set up ready to respond as they normally would. Deputy Tim Jantz was assigned role as Incident Commander. Other county personnel, Craig Fire and Rescue members, Colorado State Forest Service and BLM employees participated as they were requested as the event developed.

The county commissioners became involved when the incident commander requested their presence at a briefing where they were asked for financial support for an air tanker to protect homes. This naturally prompted questions by the



The sand table mock up was used as the basis for the exercise.

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commissioners pertaining to costs and risks. While the scenario unfolded the commissioners were briefed by Fire Management Officer Mike Rieser regarding their level of participation and what would be expected of them. At that time they formulated a quick plan designating each commissioner to fill either a logistical, operational or informational role.

An After Action Review was conducted when the exercise concluded. Many aspects of the participant's response were excellent with a very good understanding of the Incident Command System. Other points such as no signing, hazardous fuel loads, and spotty cell phone and radio coverage were identified as issues to be addressed.

All the participants and observers felt it was an invaluable exercise. The information gathered from this exercise will now be used by Moffat County as they develop the next level of their fire plan which is the Community Protection Plans. The commissioners said it was an "Eye opening experience" for them, and they continue to comment on the value of participating in the exercise.

A media briefing was held the afternoon before the exercise. The news stories generated from this briefing told the public how the agencies are working together to address impending emergency situations. A feature story which covered defensible space issues and the FireWise program was run after the exercise was completed. In all, the program ended up with three stories, one discussing what was going to happen and why, the photos and story which chronicled the event and the FireWise story letting homeowners know who to contact for assistance.

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Lookout Mountain Communication Site Fuels Reduction, Glenwood Springs Field Office

In June 2004, a project was initiated to help protect an important communication site with the collaboration and support of the U.S. Forest Service, Garfield County and the City of Glenwood Springs, Colorado. The project involved a treatment in oakbrush to cut, chip, and spray cut stumps with herbicide. Most of the oakbrush cutting and chipping was accomplished by the Prineville Hotshots while they were in Glenwood Springs commemorating the tenth anniversary of the South Canyon -Storm King Fire.

An agreement was made with through the forest service to provide the application of herbicide to the

cut oakbrush. In addition, Garfield County Road and Bridge Department aided the project by providing a tractor and mower to help clear brush along roads and trails within the project area.

The communication facilities are located on the top of Lookout Mountain which levels out into a small flat area covered with a dense stand of oakbrush creating hazardous fuels near the facilities. The treatment was designed to clear vegetation around each facility, create several fuel breaks utilizing existing roads and trails, and to break up the continuity of the oakbrush and reduce the fuel



Prineville Hotshots work to clear trees and brush adjacent to a communications facility.



A view of Lookout Mountain (center of photo) taken from the Glenwood Springs Field Office location.



Communications site following treatment work.

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loading between the fuel breaks. The treatment consisted of 11 acres of public land and one acre on city property. Most of the treatment was outside of the right-of-way for each of the communication facilities. The communication facilities provide commercial and government communication services to the public in Glenwood Springs and throughout the western slope. The government communication services include 911 communications and emergency services for the city of Glenwood Springs, Garfield County, a Federal Aviation Administration relay site, and radio repeater for the Bureau of Land Management.



A U.S. Forest Service employee applies herbicide to oakbrush stumps.



Garfield County mower clearing brush to create the fuel break.



Prinville Hotshots Team atop Lookout Mountain above the city of Glenwood Springs, Colorado.

Wyoming

Hybrid Species of Tamarisk Pose Special Challenge Researchers, Land Managers Seek Effective Solutions

In the Colorado River drainages and in river systems of the Southwest, land managers are struggling with one species of salt cedar or tamarisk (*Tamarix ramosissima*). However, on the Bighorn River, Yellowstone River, and other northern drainages, another hybrid species of tamarisk is the challenge – *Tamarix chinense*. Researchers found the hybrid as they explored biological control options.

The northern tamarisk is more a bush than a tree with trunk diameters less than on tamarisk species found further south. The northern tamarisk only reaches heights of 12-14 feet and winter kills each year's growth back to the crown. However, these crowns over-winter so re-sprouting occurs every spring. Some crowns may be 20 to 30 years old.

“Another challenge for us in the north is that our native species are less dense with only 20 to 30 trees per acre along the rivers. Tamarisk quickly out-competes native species and creates 100 percent cover,” said Steve Christy, natural resource specialist for the Bureau of Land Management Worland Field Office.

Christy said landowners, along with local county weed and pest districts, the University of Wyoming county extension offices, Wyoming Game and Fish Department, BASF and Dow Chemical companies, USDA's Natural Resource Conservation Service, and the BLM Worland Field Office's weed and fire programs are jointly funding cooperative projects that are addressing the northern tamarisk and Russian olive problem in Wyoming's Bighorn Basin.

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“Tamarisk and Russian olive (*Elaeagnus angustifolia*) now infest 40,000 acres of the Bighorn River in the Bighorn Basin. And Russian olive may infest another 80,000 acres.” said Christy. “A 1999 BLM survey of 340 water impoundments found tamarisk on every one.”

“Not only does tamarisk rob water from natives, but monocultures of the plant force wildlife away from waterholes, eliminate duck habitats, and curtail recreational access to rivers and lakes,” Alex Ogg said. Ogg is a semi-retired USDA Agricultural Research Service weed scientist working on projects for the Big Horn Basin Exotic Plant Steering Committee near Worland. “I think an even bigger problem might be the Russian olive that infests land almost everywhere tamarisk does. The Russian olive is more invasive, more shade tolerant, and will invade grassland. Tamarisk is more aggressive than Russian olive if moisture is available, but together they are eliminating our native cottonwoods, willows, and grasses along waterways.”

The question is whether the published data applies to the species of tamarisk in Wyoming and Montana.

“We know the hybrid’s seed has different dormancy characteristics, but we don’t if that means we will need different control methods,” Ogg explained. “We have dozens of plots out to find the answers.”

The BLM, local counties, and the steering committee are experimenting with mechanical control with brush rakes. This is

followed by mowing, and then by herbicide treatment of re-sprouts. The group tried goat grazing but the tamarisk came back just as thick three years after grazing was stopped.

Everyone also worked closely on prescribed burn projects in the area. These successfully eliminated the canopy biomass and made treating re-sprouts easier. Unfortunately, Christy said, burning left too many tall stumps that made re-vegetation difficult.

“Arsenal® herbicide provides excellent control as a foliar treatment when tamarisk is fully leafed, but has the disadvantage of killing other vegetation as well. However, it is well suited to areas where the tamarisk stands are large and dense. We are also using Garlon 3® herbicide and Remedy® herbicide as basal bark treatments on scattered infestations, but these treatments can be more labor intensive than foliar treatments. However, they have the advantage

of being selective and not killing desired understory plants,” Ogg said. “Success will depend on matching the right product to the right site.”

One problem compounding the difficulty of all their treatments has been an ongoing drought in the area for the past five years. A number of other things were tried, including pole planting, container planting, supplemental irrigation, and planting drought-tolerant species of cottonwood, willows, and grasses. However, restorations have all been less than successful because of the drought. Salinity of the soils in the area could be another problem with restorations efforts. More study needs to be done on this problem.

“Restoration is the goal, not just tamarisk and Russian olive removal. If we remove these invasives, but create a positive environment for Russian knapweed or other exotics, or just leave erodible bare ground, we are no further ahead,” Ogg concluded. “Control methods need to be used that increase the chances for native restoration.”

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Removing tamarisk and Russian olive along the banks of the Bighorn River in Wyoming’s Bighorn Basin with hopes of restoring native vegetation, such as cottonwoods, willows, and grasses.