

Utah Forest News

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Fire Plan and Fuelbreak Help Save Community from Wildfire

Millions of dollars of National Fire Plan funds are being spent to protect communities from wildfires around the West. The Utah community that perhaps best exemplifies this effort is Central, which lies about 25 miles north and is a few degrees cooler in temperature than St. George. The dense pinyon-juniper forests and views of the Pine Valley Mountains make it worth the commute for most residents of the 400 homes that are tucked into the rolling terrain.

Toward the end of the workday on August 12, 2004, as most of Central's residents were about to start their drive home, a thunderstorm delivered a bolt of lightning that ignited the Cal Hollow Fire, and Central's fire preparations were put to the test. Although the process began just two and a half years prior, they had a Community Fire Plan (see UFN Spring 04) in place and a fuelbreak encircling the town.



Washington County Fire Warden Bill Murphy in Central, Utah, with residual fuelbreak piles burning in the background. The Cal Hollow fire had burned most of the hillside above the fuelbreak.

Bill Murphy is the Washington County Fire Warden and a resident of Central. He happened to be returning from errands in St. George that warm August day, and as he came over the hill he was greeted with the heart-thumping view of a smoke column rising from the edge of town. The volunteer fire department was already on the scene and Murphy established a joint command of the fire with Fire Chief Mike Johnson as soon as he arrived a few minutes later.

Murphy explained, "The firebreak slowed the fire down, giving us time to get the heavy air tankers in, cooling
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off the fire to allow us to get hose lays in. Otherwise the fire would have spotted across Highway 18.” Even with recently cut material piled within the fuelbreak, it was still effective. By late that night, seven engines and two Hotshot crews were on site and the fire was safely contained, but its lessons go beyond its boundaries.

The fuelbreak Murphy speaks of is a 250-foot wide swath of thinned woodland encircling the town. The fuelbreak was a cooperative project between the people of Central and several agencies; it made use of National Fire Plan funds and obviously required a great deal of work to complete. While there was some initial skepticism and complaint about the look of the fuelbreak, residents have come to accept it, says Murphy. “The fire turned the doubters around, although they were always a small percentage.”

“The Community Fire Plan is doing tons of good things,” Murphy added, explaining that the process had started slowly about two and a half years ago with him playing mostly an advisory role. He points out that it has “taken off with a great deal of zeal” crediting “a few guys who just get things done.”

Murphy used the fire plan on the day of the incident to identify available water resources without having to chase people down to figure it out. Names and

contact information for local heavy equipment operators were referenced in the plan and utilized that day. The document also has an evacuation plan, which Murphy credits for the success of that procedure. “Folks met at the fire station and then went on to the evacuation center, according to plan.”



Photo by Michael Stahel

North winds push the Cal Hollow fire downhill toward the community of Central.

Central was among the first towns in Utah to have a Community Fire Plan. So far Washington County has ten Community Fire Plans in place, and Murphy says that they need about 20 more to cover all of the communities in the county. He

says this approach makes the most sense for the use of his time, going on to call each Community Fire Plan “a living-growing document that will last the lifetime of a community.” He hopes that funds continue to be available for communities to write plans and that communities continually work in and out of their boundaries to improve their fuelbreaks.

Despite the success of the fuelbreak in saving the town, Murphy warns other work must be done within the community; “Fuelbreaks slow fires, they don’t stop them. It is just one component of the plan.”

Murphy offered a few more lessons from this and the many other fires he has seen during his 36-year career which includes a decade with Hotshot and other elite firefighting crews.

He stressed how fuelbreaks need to be built close to the community to provide firefighters a place to work from to control a fire. He also recommended thinning and removing brush and ladder fuels some distance either side of the fuelbreak. This feathering may also help to lessen the striking visual impact of a fuelbreak some residents find unappealing. He also advised that fuelbreaks should be designed with road access for fire equipment, and with safety zones for firefighting personnel. Finally, he recommended building earthen water catchments into the fuelbreaks, similar to cattle ponds that ranchers build for their stock, for an easily accessible water source during a fire incident.

I asked Murphy for his opinion of the Australian example of fire response where, instead of evacuating people, residents are told to go home and lend assistance to help the firefighting forces that are working to save their homes. His unexpected but commendable response was, “My goal is to make the community so defensible that when a fire does occur

everyone can leave and that way no one is threatened or at risk. It’s all about preparation ahead of time.”

Murphy is obviously taking this point of view to heart, as there was a freshly cut juniper tree near the corner of his house on the September morning I arrived to write this story. Upon greeting me on his front porch I was complimenting his beautiful home and view of the Pine Valley Mountains, and Murphy replied, “Yeah, it’s a great place to spot fires from.”

Just as he said this we looked up on the hillside and were surprised to see a small fire burning that was a holdover from a lightning storm a few days before. I had to agree that it was indeed a good place to spot fires from!

By Darren McAvoy

New Extension Forester in Heber City

Please welcome Morgan Mendenhall to USU Forestry Extension. Morgan grew up in Hurricane, Utah, and recently completed a Bachelor of Science degree in Forestry from Utah State University. He also holds an Associate of Science degree from Dixie State College. His field experience includes doing vegetation surveys for the Dixie National Forest and Camp Williams National Guard Base.

He has a strong background in plant identification and in riparian monitoring, photo point monitoring, and rare plant surveys. His understanding of remote sensing

and GIS applications will also be a welcome addition to our office.



Mendenhall is available to assist private forest and woodland owners and to provide education related to fire safety and other issues in the wildland-urban interface. He will also focus on providing public and youth education about forests, forestry, and related subjects. He is based out of the Wasatch County Extension office in Heber City and will work primarily in the south-

eastern part of the state. He can be reached at 435-657-3233 or morganm@ext.usu.edu.

Fighting Fire with Goats at Camp Williams

The Environmental Resource Management Office of the Utah National Guard has been using goats to help reduce fire danger at Camp Williams. Environmental Resource Managers Douglas Johnson and Sean Hammond started using goats in 2000 on the National Guard training facility located east of Point of the Mountain.

They manage the 25,000-acre mosaic of Gambel oak, sagebrush, and pinyon-juniper. While most land managers are concerned with keeping fire off of their land, Camp Williams has the unusual task of keeping fires contained within the installation.

With a training mission that involves using live ammunition and explosives, large wildfires are a frequent occurrence. In order to protect neighboring communities and increase firefighter safety, goats are being used in high concentrations to restructure vegetation and inhibit the ability of a wildfire to spread.

Using goats to create fuelbreaks is not an entirely new idea, but it is still a rarely used method that has many advantages over other techniques. Goats became the chosen method for Camp Williams because managers decided they are less expensive, more publicly acceptable, and more effective than other management

techniques. Herbicide use was deemed undesirable due to the expense and negative public perception. Managers at Camp Williams are currently prohibited from using prescribed fire as a management tool. Mechanical methods such as bulldozing and thinning are expensive and more likely to elicit a negative public response.



Goats working on a firebreak at Camp Williams.

One of the most important aspects of using the goats is confining them to a specific area. This is achieved using solar-powered electric fences which can be custom sized for the area to be grazed and easily moved as required.

These pens are typically placed along roads to help increase the width of the firebreak and to enhance the ability of firefighters to fight a wildfire. Close proximity to roads is also a necessity due to the goats' constant need for large amounts of water that is trucked in regularly by their owners, D'Goat Farms.

The number of goats varies; they typically run about 500 adults plus the year's offspring in the pens. Keeping the goats in such high concentrations forces them to eat all the vegetation and prohibits them from selecting only the most palatable. The large amount of traffic in such a small space also creates many

trails, which managers consider desirable because they result in mini-fuelbreaks that help break up the continuity of available fuel.

In their fourth year of the project, managers feel the goats are meeting their objectives and that they have successful fuelbreaks. Although oak brush can have a substantial amount of re-growth in the impacted areas, the fuel load is substantially decreased and restructured. Managers are convinced the fuelbreak will at least slow or even stop an advancing wildfire and assist firefighters in extinguishing the fire.

In 2001, a fire burning under extreme conditions approached one of the test areas that had been grazed. Firefighter Lieutenant Colonel Robert Dutton who was working on the fire believes that “if that firebreak had extended across the whole northern boundary, we would have been able to contain the fire there.” Long-term changes in vegetation composition and erosion have not been determined, but are not expected to be dramatic. Hammond is “encouraged by

the results and expects them to fulfill our objectives of containing wildfires on Camp Williams, increasing firefighter safety, and decreasing risks to neighboring communities.”

For more photos of firefighting goats at Camp Williams go to http://extension.usu.edu/forestry/management/Fire_Goats.htm. Other Web sites with information about Firefighting Goats include www.livestockforlandscapes.com and www.goatsrus.com.

For more information about D’Goat Farms contact Jason Garn at 801-440-2149 or write jasondgarn@hotmail.com; 18290 North 4440 West Fielding UT, 84311

By Morgan Mendenhall

Free National Woodlands Magazine Offer

National Woodlands Magazine: The Voice of Family Forest Landowners is being offered free of charge to recipients of the Utah Forest News starting in January 2005. Respondents will receive quarterly issues of this full color publication from the National Woodland Owners Association, which seeks to promote “the wise use of America’s forest resources.” One of the highlights of the magazine is a regular feature on Timber and Taxes, as well as features on other topics relevant to woodland owners. To sign up for the offer contact Darren McAvoy by December 10, 2004, at 435-797-0560 or darren.mcavoy@usu.edu.

Fourth Biennial Utah Forest Taxation and Estate Planning Conference

Join us for a day-and-a-half of classroom presentations by three nationally recognized experts in forest taxation and estate planning. Landowners concerned about protecting their investments and resources from undue tax burdens will benefit from the information provided. Utah landowners evaluating previous taxation conferences said: speakers are “witty, funny, and well seasoned— good conference,” “Really enjoyed the presentations—the day zoomed by” and “a lot of good information from knowledgeable experts.” The conference is scheduled for January 26 and 27 at the Marriott Hotel in downtown Provo. Conference cost is \$50 and includes course materials, refreshment breaks, and lunch. For more information or to register, contact Darren McAvoy, or look for a brochure coming soon by mail.

Effects of the Cascade Springs Fire on Public Perceptions of Wildland Fuels Treatments

On September 23, 2003, a prescribed burn to treat 600 acres of oak woodland near Cascade Springs on the Uinta National Forest went out of control, resulting in a 7,828-acre wildfire that sent smoke into the Salt Lake City-Provo area for a week. Coming at the end of a busy wildfire season in the fifth year of a prolonged drought, and affecting a rapidly growing metropolitan area where air quality is a major concern, the incident drew intense criticism from local government officials, news media, and the public. Further adverse publicity came when a Forest Service review team blamed fire officials for poor planning. As a result, some fire managers have wondered if public outcry will make it difficult to use prescribed fire to treat unnatural fuel loads in northern Utah for years to come.



Gambel oak actively resprouting one year after the Cascade Springs fire.

To answer this question we initiated a study of public attitudes and knowledge regarding prescribed fire and other aspects of the wildland fuels issue in northern Utah, focusing on an assessment of the effects of the Cascade Springs incident. Surveys were mailed in November and December 2003 to randomly selected households in Salt Lake, Utah, and Wasatch counties. This summary report describes preliminary findings from this study.

Our efforts were aided by the fact that a national study of the social acceptability of fuels treatments in 2001 had included a survey of households in western

portions of the Salt Lake metro area. Although the geographic areas covered by the two surveys are not identical, by repeating some 2001 questions we could compare results of two public attitude surveys from the same metropolitan region before and immediately after the fire. In addition, we attempted to contact and re-survey Salt Lake County residents from the original 2001 survey. Responses were received from

268 citizens in the three counties, and 43 persons from the original study agreed to be re-surveyed.

Overall, 82% of respondents supported use of prescribed fires, but only 31% agreed it is “a legitimate tool that resource managers should be able to use whenever they see fit.” In contrast, 80% supported use of mechanical fuels treatments including 42% who feel it can

be used wherever managers believe it is appropriate. About twice as many people said prescribed fire should not be used in populated areas even if it means a higher risk of wildfires as said it should be used wherever needed to reduce fuel loads. Smoke, and its effect on public health, was the main cause of concern about prescribed fire. Scenic and recreation impacts were of low concern.

Virtually every respondent (96%) had heard of the Cascade Springs incident, and 70% said it changed their feelings about prescribed fire: 44% who feel more negative about its use, and 67% who feel



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more skeptical about fire managers' ability to use it. Nonetheless, the Forest Service remains the fire management agency most trusted by the public to make good decisions about wildfires and fire prevention.

Comparisons of 2001 and 2003 survey results found no statistically significant difference in the overall acceptability of prescribed fire or mechanical treatment. What changed most notably are the levels of trust in public agencies, and the amount of concern about smoke. Citizens at the end of 2003 were less likely to express full trust in state and federal agencies and more likely to say they have limited trust. Numbers of people expressing no trust in the Forest Service and BLM also increased, although this group still constitutes less than 10% of respondents. Fully three-fourths of citizens now say they are concerned about smoke from prescribed fires (compared to a little more than half in 2001). When asked more specifically about smoke, 2003 respondents were less likely to say smoke is not an issue with them, that it's a necessary inconvenience, and that it's managed acceptably; they were more likely to say they're concerned about its effect on public health.

Analysis of the 43 surveys from 2001 respondents found results similar to those of the larger study. For those whose trust level changed, virtually all change

was in a negative direction. Concern about smoke changed most strongly, and respondents were more likely to say they would be worried if a fire broke out near their homes.

The most important finding from this portion of the study may be the number of responses that were different between 2001 and 2003. While percentages varied somewhat, questions typically drew different answers from 40-50% of respondents. This suggests that ideas about wildfire and fuels management are not strongly held, and can change easily in response to new information or to persuasive arguments for or against an issue.

In summary, it appears that the Cascade Springs incident did affect citizens' attitudes toward the use of prescribed fire as a management tool, but that doesn't mean it must be removed from the toolkit altogether. Citizens are likely to support prescribed fires in more remote locations where smoke is not likely to affect many people, even if it means a temporary loss of scenic quality or recreation opportunity. Trust, while negatively affected, remains high enough that prior levels can be restored with judicious use of fire over the next few years.

*By Mark Brunson and Jessica Evans
Department of Environment & Society, USU*

For more information regarding any information presented in this newsletter, please call Darren McAvoy at Utah State University, 435-797-0560, write to him at 5230 Old Main Hill, Logan, UT 84322-5230, or email darren.mcavoy@usu.edu.

State of Utah Division of Forestry, Fire & State Lands (DFF&SL) service foresters for your area can be contacted by calling 801-538-5555.

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Ideas and written contributions to this newsletter are encouraged. Send your contributions or comments to the return address above or call 435-797-0560, or email darren.mcavoy@usu.edu.

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Utah State
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Forest Landowner Education Program
 College of Natural Resources
 5230 Old Main Hill
 Logan, UT 84322-5230



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COMING EVENTS:

• **The Next 100 Years: A Conference on Fire and Forest Health**—Nov. 18-19, 2004, Boise, ID. This USDA Forest Service-sponsored conference will address such topics as forest priorities, forest health conflicts, and future forest conditions. For more information go to The Andrus Center for Public Policy Web site at www.andruscenter.org, email them at info@andruscenter.org, or call them at 208-426-4208.

• **Fourth Biennial Utah Forest Taxation and Estate Planning Conference**—Jan. 26-27, 2005, Marriott Hotel, downtown Provo. Landowners concerned about protecting their investments and resources from undue tax burdens will benefit from the information provided. For more information or to register, contact Darren McAvoy at 435-797-0560 or darren.mcavoy@usu.edu.



Cedar Mountain was one of the field stops for the 182 attendees of the Managing Aspen in Western Landscapes Conference held in Cedar City this September. Many of the talks are available under the What's New tab on our Web site: <http://extension.usu.edu/forestry/>.