

# Utah Forest News

## Utah Forest Landowner Education Program Newsletter

Volume 12 Number 3

**Utah State**  
UNIVERSITY

COOPERATIVE  
**extension**

Summer 2008

### Fuel Break Project Underway on Promontory Mountain

In Utah, the individuals most responsible for preventing and suppressing wildfire on private lands are county fire wardens.

Recently, fire wardens from several northern Utah counties were asked which areas within their jurisdiction were at the greatest risk for problematic wildfires. Their resounding answer was Promontory Mountain, an area with a history of erratic, high intensity wildfires that regularly threaten its resources.

Promontory Mountain is the 25-mile long peninsula that juts out into the Great Salt Lake from the north. It is perhaps best known as the location of the Golden Spike National Monument, where the Union Pacific and Central Pacific Railroads joined in 1869 to complete the first transcontinental railroad track in the U.S. It is a high desert landscape that at first glance appears to be quite barren, but upon closer inspection contains juniper, maple, hackberry, many grasses, and a wide variety of wildlife. Today, Promontory Mountain is used mainly as grazing land, but it also hosts a

Doppler Radar facility used to track weather systems, a few houses and businesses, and even a village of brine shrimp fishermen and their families.



*Promontory Mountain has a history of erratic, high intensity wildfires.*

Morgan Mendenhall, Bear River Area Forester with the Utah Division of Forestry, Fire and State Lands (DFFSL), has been charged with the task of creating 50 miles of fuel breaks on Promontory Mountain. The project will hopefully contain, or at least slow down, the erratic wildfires that could potentially occur on the mountain. A fuel break is simply an area where the fuels that feed a wildfire, in this case

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mostly grasses, have been removed or modified so that fire cannot burn through them. The fuel breaks on Promontory Mountain will be constructed by bulldozers, and locating terrain that is gentle enough to run dozers on is one of the more challenging parts of this project.

The dozer lines will be approximately 100 feet wide and will be built in a crisscrossing east-to-west pattern across Promontory Mountain (see map at right). In order to reduce the amount of constructed line, natural fire barriers, such as rocky slopes, will be used instead of dozer lines whenever possible.

After construction, all fuel breaks will be reseeded with a mix of fire-resistant species that are competitive with cheatgrass. These species will also be desirable forage for grazing animals. Chemicals will be used to inhibit the germination of annual grasses, such as cheatgrass, within the fuel breaks. This should give the seed mix its best chances of successfully occupying the site.

The Promontory Mountain fuel break project is a cooperative effort between the Utah DFFSL, the Division of Wildlife Resources, Box Elder County, the Utah Foundation for Quality Resource Management, and 13 landowners.

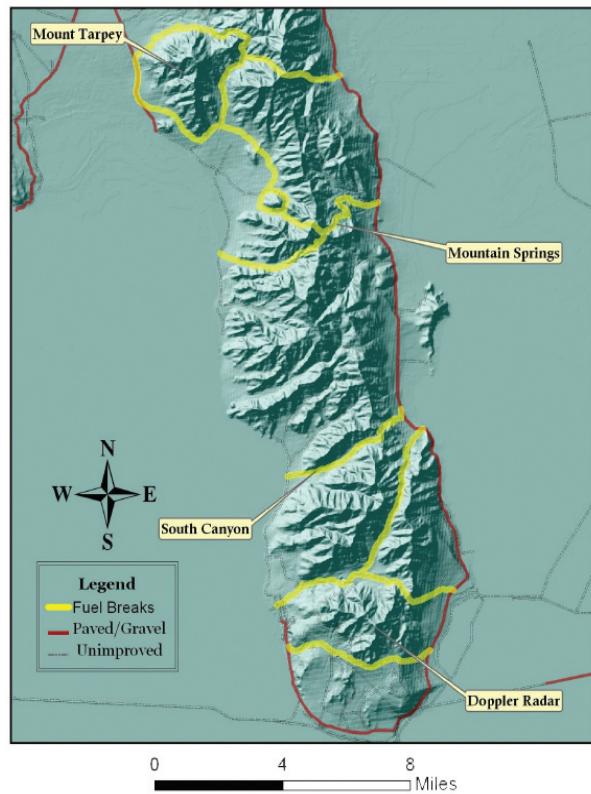
Staying in front of a fast-moving wildfire is always a challenge for firefighters, and these fuel breaks should be a significant help in protecting the resources of Promontory Mountain. Also, firefighters responding to fires in the area will now have a safer place from which to battle the erratic, wind-driven fires that Promontory Mountain is known for.

by Darren McAvoy



*Bear River Area Forester Morgan Mendenhall. The Promontory Mountain Doppler Radar can be seen in the distance.*

## PROMONTORY FUEL BREAKS



## Lone Peak Nursery: A Seedling Source for Utah Forest Landowners

Utah forest landowners should be aware of a valuable tree seedling resource in the state that is currently under-utilized by non-agency customers. The Lone Peak Nursery in Draper, Utah, provides a wide variety of tree, shrub, grass, and wetland plant seedlings for conservation purposes. They also offer direct assistance on planting procedures and seedling care. According to Nursery Manager Brandon Long, much of the nursery's current business comes from land management agencies, but they also want to reach out to landowners who need seedlings for reforestation, windbreaks, post-harvest erosion control, or any other sort of conservation project. With bark beetles causing widespread devastation on private lands throughout the state, the Lone Peak Nursery can be an especially great resource for landowners hoping to restore the forests on their property.

The Lone Peak Nursery was established during the 1920s as a joint effort by the U.S. Forest Service and the State of Utah. Its purpose from the beginning was to provide a large, reliable source of seedlings to individuals and agencies involved in conservation projects throughout the state. The nursery's original location was in Logan, Utah – first on the Utah State

University campus and later at the mouth of Green Canyon. In 1976, the first Utah State Forester, Paul Sjoblom, decided to move the nursery to its current location, next-door to the Utah State Prison. For many years, the proximity of the prison allowed for a unique inmate work program at the nursery. Crews of

prisoners worked regularly at Lone Peak, providing low-cost labor and learning valuable job skills in the process. However, according to Long, security concerns eventually led the Utah Correctional Institute to require two officers to be present while the prisoners worked. Because the nursery could not afford to pay the salary of these officers, they had to end the prisoner work program.

Now they hire temporary laborers to work at the nursery.

Since its inception, Lone Peak Nursery has remained committed to providing reasonably priced seedlings to landowners, agencies, and organizations throughout the state. Their inventory changes from year to year; this year, they produced 11 conifer species and 23 deciduous species. The nursery also grows and sells shrubs and wetland plants. The nursery provides both



*Lone Peak Nursery, located next to the Utah State Prison in Draper, Utah, provides seedlings to landowners, agencies and other organizations involved in conservation projects.*

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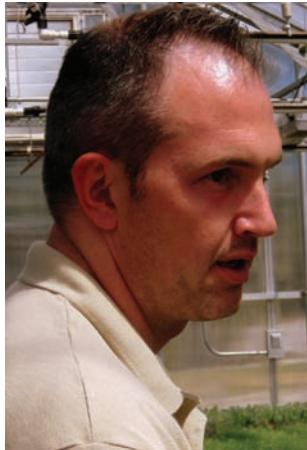
native and locally adapted seedlings, but they are in the process of trying to eliminate their non-native inventory, according to Long. They currently carry several fast-growing non-native tree species that are good for windbreaks, including Austrian Pine, Scots Pine, and Nanking Cherry, but these species may be discontinued in the future.

The minimum order from Lone Peak Nursery is 100 seedlings, and it is also necessary to buy a minimum of 25 seedlings of any one species, since that is how they are bundled (the 25-minimum policy may change in the future). Both bare-root and container seedlings are available – the bare-root seedlings are shipped in from a federal nursery in Boise, while the container seedlings are grown on-site.

Seedlings for sale at the nursery are not intended for landscaping use, and Long encourages landowners with smaller acreages who are only looking for a few trees to consult a smaller, private nursery. Private nurseries with lower production levels can provide smaller numbers of seedlings, and they can also provide types of trees that are too labor intensive for a large nursery like Lone Peak to produce in significant numbers. Utah Juniper is an example of a species that takes a great deal of time and attention to nurture from seed to seedling and is not available at Lone Peak. It is available, however, at many smaller nurseries throughout the state that are not focused on producing large numbers of seedlings.

Unlike many federal nurseries, the Lone Peak Nursery does not get the majority of its business through contracts. This makes it difficult for the nursery to

*Seedling species from top to bottom are 1) Englemann Spruce, 2) Quaking Aspen, and 3) Rocky Mountain Juniper, Pinyon Pine, and Giant Sequoia*



*Brandon Long*

predict how many seedlings they will need in a given year and what species will be in demand. Given these constraints, Long says it is very important for nursery customers to understand that if they have a big project in mind, they will need to budget in some lagtime with their seedling orders. A landowner hoping to plant 20,000 Douglas-fir seedlings,

for instance, is going to need to give the nursery 18 months to grow those seedlings. "If we happen to have the trees they need, that's great" Long says,

"but if not, the nursery is not going to be able to get a bunch of seeds to seedlings in three months."

Landowners interested in buying seedlings from Lone Peak Nursery can contact Brandon Long by phone at 801-571-0900, or email at [brandonlong@utah.gov](mailto:brandonlong@utah.gov). The nursery also has a website (currently under construction) at <http://seedlings.utah.gov>.

*by Olivia Salmon*



## Cedar Mountain Aspen: Long-term Observations of Aspen Die-off and Historic Sheep Numbers - Guest Editorial

Our combined experience of more than 50 years studying Cedar Mountain tells us that blaming aspen decline on livestock grazing is too simplistic. Although we welcome all opinions, we feel that our experience makes us uniquely qualified to judge the long-term effects of livestock grazing on aspen stands in this area.

The aspen stands on Cedar Mountain (Kolob Plateau) are dominated by nearly pure "stable" or "climax" stands of aspen; these stands lack associated conifers. In contrast, the aspen stands on the Markagunt Plateau, approximately 1000 feet higher in elevation, have an understory of conifers that eventually replace aspen in succession. Aspen is accurately recognized as a disturbance species that reproduces almost exclusively from root suckers rather than seed. "Suckering" is most successfully stimulated

by disturbances of these mature stands. These disturbances are mainly logging and/or fire. Fire is an effective tool for aspen regeneration when there is an understory of combustible conifers, but pure stands of aspen are very fire resistant. Reports from missionaries in the 1850s indicate that local Indian tribes "burned everything they could" during August of a drought year. Native Americans may have burned aspen when conditions were optimum, but these incidents occurred more than 140 years ago.

Landowners with century-long memories have never seen fire on Cedar Mountain. There is absolutely no evidence of a fire on the mountain since the 1860s, either in charcoal or in journals and oral histories reported by descendants of pioneer families. Grasses to carry a fire grew in many of these stands, but by

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the time they have dried out from winter snow melt, they are re-moistened by the area's typical summer monsoon rains. We therefore maintain that burning is not an effective disturbance on Cedar Mountain today.

The first homesteads on Cedar Mountain were settled in 1862. These early homesteads were all supported by dairying; therefore Cedar Mountain was grazed since that time. Sheep were first taken on Cedar Mountain in

1870, as reported by historian William Palmer. It is important to understand that the early settlers were Welsh; they had lots of experience in mining, but no experience with sheep. Herds were brought up on the mountain as early in the season as possible and left as long as possible. At that time, there was no such thing as range science to guide these early setters; it was simply a matter of trial and error.

As a result, these private lands have received heavy, even excessive, grazing use. An estimated 100,000 sheep grazed in Iron County by the mid 1870s. In 1910, there were about 250,000. Years of heavy use were exacerbated by the most severe drought in recorded history from 1896 to 1905, and Cedar Mountain was converted from a tall forb community to a grassland. About 25,000 sheep currently graze

in Iron County. The precipitous drop occurred around 1940. Herbivory is currently at a historical low.

It is most interesting that some of the areas with the healthiest aspen stands today received the greatest grazing pressure past and present. A study conducted by Seth Ohms found that most of the aspen regeneration on Cedar Mountain occurred during a narrow 5-10 year period around 1910, when grazing

pressure on the mountain was at its historic high. It is our belief that cutting aspen for fences may have caused this. Nearly every fence built on the mountain at that time was an aspen pole fence, and aspen poles were also used for corrals, other structures, and fire wood.



*A 2002 Cedar Mountain field tour led by Jim Bowns and Chad Reid reveals vigorous aspen regeneration in a heavily grazed clearcut.*

What is difficult to understand is how aspen regenerated under this severe grazing, with at least four times the number of sheep than we have today, and perhaps a 30 percent longer season. What's more, they had few or none of the fences we have today, none of the deferred rotation grazing systems we have in place today, and a record-breaking drought. Yet these same clones cannot successfully regenerate today with low livestock numbers under good management. All of which leads us to believe that livestock grazing is not the "key" factor affecting regeneration.

# Utah Forest News

More recently, from the 1950s through the 1970s, aspen was harvested for excelsior products such as packing materials and cooler pads for evaporative air conditioners. None of these stands were protected from grazing, and all regenerated successfully.



*Jim Bowns*



*Chad Reid*

Many aspen stands have regenerated on the mountain under much greater grazing pressure than is now the case, yet aspen decline on the mountain has manifested itself in the last 10 years with greatly reduced deer and livestock numbers. Even today, many aspen stands are regenerating successfully without protection from grazing.

We are well aware that heavy grazing that has had a great influence on the ecology of Cedar Mountain, and we don't discount the effects grazing has had and continues to have on this area and other areas throughout the western United States. However,

we cannot support placing all the blame or even the preponderance of the blame for aspen decline on livestock grazing. We believe that a complex cycle of climate change, insect infestations, disease, and a lack of disturbance better fit with our observations and experience.

*by Jim Bowns, PhD, Range Ecologist, and Chad Reid, MS, Iron County Extension Agent*

For more information regarding any of the 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.

The Utah State University Forestry Extension Web site, found at <http://extension.usu.edu/forestry>, is an excellent source of technical forestry information for woodland owners. Check the "What's New" section periodically for new postings.

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

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 University is an affirmative action/equal opportunity institution.  
This newsletter is partially supported by USDA Forest Service State and Private Forestry.

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### COMING EVENTS

**Forestry in a Climate of Change: 2008 SAF National Convention.** November 5-8, 2008. Reno, NV. For details, visit [www.safnet.org/natcon-08/](http://www.safnet.org/natcon-08/).

**Climate Change, Fire, and Other Hot Topics: Forest Inventory and Analysis Symposium 2008.** October 21-23, 2008. Park City, UT. For more information, visit [www.fia.fs.fed.us/symposium](http://www.fia.fs.fed.us/symposium).

**Southwest Sustainable Forestry Partnership Conference:** November 12-14, 2008. Flagstaff, AZ. For more information visit [www.littlecolorado.net/SWSFP/](http://www.littlecolorado.net/SWSFP/).



*This Douglas-fir was submerged in the Great Salt Lake for nearly 90 years as part of the Lucin Cutoff Railroad Trestle. Now this uniquely weathered timber is being salvaged and sold by the Trestlewood Company.*